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‘PIONEERS’

BEING

SELECTED PROSE FOR LANGUAGE STUDY

*Compiled and Edited, with Notes, Glossary and
Exercises, by*

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PREFACE

THIS book is primarily intended for use as a ' language ' text by Intermediate Students in India. It may be used as the basis of language work such as translation, paraphrase, reproduction from memory, and a variety of composition exercises, as well as for the study of useful grammar, idiom, colloquial phrases and vocabulary. Forty exercises are given in Appendix B, but many more can be framed by the teacher. To help students towards a better distribution of stress there is a Special Glossary (Appendix A).

The compilers hope that the book will not be used in the manner which ' appalled ' the authors of certain paragraphs¹ in the Calcutta University Commission Report on " Methods of Lecture-Instruction, especially in English." Many entries in the notes are questions ' assigned ' to the student, requiring explicit answer by him, and not by the teacher in the form of a ' meticulous annotation ' dictated to the class. The lists of synonyms frequently given in the notes are not furnished as equivalents, but suggested as matter for exercises similar to those in Appendix B, numbers 2 and 8. We hope that the student will be frequently ' challenged to give his own interpretation ' in class,

¹ Calcutta University Commission Report. Vol. I., Chapter XII., Section III., Paras. 28-31.

and that his mind will be offered exercises more pointed than that of 'getting the gist' of easy prose. The Chapters from Doughty, properly treated, should be a valuable corrective of slipshod reading merely 'to get the gist.'

The selected chapters present sharp contrasts of style which should exercise the most rudimentary critical faculty. Most junior students will appreciate the difference between Darwin's English and Livingstone's or Speke's, or between Doughty and Candler, Wallace and Scott; and they will probably be able to say which of the passages having the characteristics of written English, could also be considered 'literature,' and which passages are more like the language of ordinary intercourse. A valuable language lesson will have been learnt when the student understands the gulf that separates the language of *Arabia Deserta* from the English of the personal journals of Captain Scott.

The selection also shows variety of form as well as of style—it offers good examples of scientific record, of description, of narrative, of story-telling, of exposition and of argument.

The matter of the passages is also of considerable value; students will add something to their knowledge of the world from first-hand and first-rate sources; they will feel something of the spirit of discovery, of the hunger of the quest, and will learn a little in 'the traveller's school of humanity.'

J. R. F.

M. G. S.

LAHORE, 1927.

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J. R. F.

M. G. S.

I

CHARLES DARWIN

I. TIERRA DEL FUEGO

HAVING now finished with Patagonia and the Falkland Islands, I will describe our first arrival in Tierra del Fuego. A little after noon we doubled Cape St. Diego, and entered the famous Strait of Le Maire. We kept close to the Fuegian shore, but the outline of the rugged, inhospitable Staten-land was visible amidst the clouds. In the afternoon we anchored in the Bay of Good Success. While entering we were saluted in a manner becoming the inhabitants of this savage land. A group of Fuegians, partly concealed by the entangled forest, were perched on a wild point overhanging the sea ; and as we passed by they sprang up and waving their tattered cloaks sent forth a loud and sonorous shout. The savages followed the ship, and just before dark we saw their fire, and again heard their wild cry. The harbour consists of a fine piece of water half surrounded by low rounded mountains of clay-slate, which are covered to the water's edge by one dense gloomy forest. A single glance at the landscape was sufficient to show me how widely different it was from any thing I had ever beheld. At night it blew a gale of wind, and heavy squalls from the mountains swept past us. It would have been a bad time

out at sea, and we, as well as others, may call this Good Success Bay.

In the morning the Captain sent a party to communicate with the Fuegians. When we came within hail, one of the four natives who were present advanced to receive us, and began to shout most vehemently, wishing to direct us where to land. When we were on shore the party looked rather alarmed, but continued talking and making gestures with great rapidity. It was without exception the most curious and interesting spectacle I ever beheld : I could not have believed how wide was the difference between savage and civilised man : it is greater than between a wild and domesticated animal, inasmuch as in man there is a greater power of improvement. The chief spokesman was old, and appeared to be the head of the family ; the three others were powerful young men about six feet high. The women and children had been sent away. These Fuegians are a very different race from the stunted, miserable wretches farther westward ; and they seem closely allied to the famous Patagonians of the Strait of Magellan. Their only garment consists of a mantle made of guanaco skin, with the wool outside ; this they wear just thrown over their shoulders, leaving their persons as often exposed as covered. Their skin is of a dirty coppery red colour.

The old man had a fillet of white feathers tied round his head, which partly confined his black, coarse, and entangled hair. His face was crossed by two broad transverse bars ; one, painted bright red, reached from ear to ear and included the upper lip ; the other, white like chalk, extended above and parallel to the

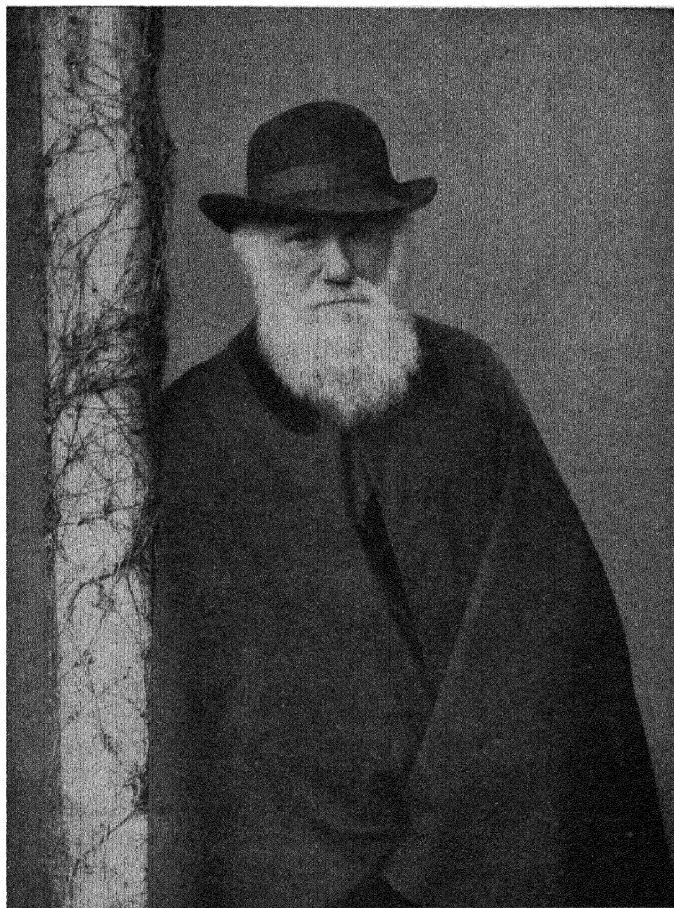


Photo. Elliott & Fry

CHARLES DARWIN

first, so that even his eyelids were thus coloured. The other two men were ornamented by streaks of black powder, made of charcoal. The party altogether closely resembled the devils which come on the stage in plays like 'Der Freischütz.'

Their very attitudes were abject, and the expression of their countenances distrustful, surprised, and startled. After we had presented them with some scarlet cloth, which they immediately tied round their necks, they became good friends. This was shown by the old man patting our breasts, and making a chuckling kind of noise, as people do when feeding chickens. I walked with the old man, and this demonstration of friendship was repeated several times; it was concluded by three hard slaps, which were given me on the breast and back at the same time. He then bared his bosom for me to return the compliment, which being done, he seemed highly pleased. The language of these people, according to our notions, scarcely deserves to be called articulate. Captain Cook has compared it to a man clearing his throat, but certainly no European ever cleared his throat with so many hoarse, guttural, and clicking sounds.

They are excellent mimics: as often as we coughed or yawned, or made any odd motion, they immediately imitated us. Some of our party began to squint and look awry; but one of the young Fuegians (whose whole face was painted black, excepting a white band across his eyes) succeeded in making far more hideous grimaces. They could repeat with perfect correctness each word in any sentence we addressed them, and they remembered such words for some time. Yet we Europeans all know how difficult it is to distinguish apart

the sounds in a foreign language. Which of us, for instance, could follow an American Indian through a sentence of more than three words? All savages appear to possess, to an uncommon degree, this power of mimicry. I was told, almost in the same words, of the same ludicrous habit among the Caffres: the Australians, likewise, have long been notorious for being able to imitate and describe the gait of any man, so that he may be recognised. How can this faculty be explained? Is it a consequence of the more practised habits of perception and keener senses, common to all men in a savage state, as compared with those long civilised?

When a song was struck up by our party, I thought the Fuegians would have fallen down with astonishment. With equal surprise they viewed our dancing; but one of the young men, when asked, had no objection to a little waltzing. Little accustomed to Europeans as they appeared to be, yet they knew and dreaded our fire-arms; nothing would tempt them to take a gun in their hands. They begged for knives, calling them by the Spanish word 'cuchilla.' They explained also what they wanted, by acting as if they had a piece of blubber in their mouth, and then pretending to cut instead of tear it.

I have not as yet noticed the Fuegians whom we had on board. During the former voyage of the *Adventure* and *Beagle* in 1826 to 1830, Captain Fitz Roy seized on a party of natives, as hostages for the loss of a boat, which had been stolen, to the great jeopardy of a party employed on the survey; and some of these natives, as well as a child whom he bought for a pearl-button, he took with him to England, determining to educate them and instruct them in religion at his own expense.

To settle these natives in their own country was one chief inducement to Captain Fitz Roy to undertake our present voyage ; and before the Admiralty had resolved to send out this expedition, Captain Fitz Roy had generously chartered a vessel, and would himself have taken them back. The natives were accompanied by a missionary, R. Matthews ; of whom and of the natives, Captain Fitz Roy has published a full and excellent account. Two men, one of whom died in England of the small-pox, a boy and a little girl, were originally taken ; and we had now on board, York Minster, Jemmy Button (whose name expresses his purchase-money), and Fuegia Basket. York Minster was a full-grown, short, thick, powerful man : his disposition was reserved, taciturn, morose, and when excited violently passionate ; his affections were very strong towards a few friends on board ; his intellect good. Jemmy Button was a universal favourite, but likewise passionate ; the expression of his face at once showed his nice disposition. He was merry and often laughed, and was remarkably sympathetic with any one in pain : when the water was rough, I was often a little sea-sick, and he used to come to me and say in a plaintive voice, ‘ Poor, poor fellow ! ’ but the notion, after his aquatic life, of a man being sea-sick, was too ludicrous, and he was generally obliged to turn on one side to hide a smile or laugh, and then he would repeat his ‘ Poor, poor fellow ! ’ He was of a patriotic disposition ; and he liked to praise his own tribe and country, in which he truly said there were ‘ plenty of trees,’ and he abused all the other tribes ; he stoutly declared that there was no Devil in his land. Jemmy was short, thick, and fat, but vain of his personal

appearance ; he used to wear gloves, his hair was neatly cut, and he was distressed if his well-polished shoes were dirtied. He was fond of admiring himself in a looking-glass ; and a merry-faced little Indian boy from the Rio Negro, whom we had for some months on board, soon perceived this, and used to mock him : Jemmy, who was always rather jealous of the attention paid to this little boy, did not at all like this, and used to say, with rather a contemptuous twist of his head, ' Too much skylark.' It seems yet wonderful to me, when I think over all his many good qualities, that he should have been of the same race, and doubtless partaken of the same character, with the miserable, degraded savages whom we first met here. Lastly, Fuegia Basket was a nice, modest, reserved young girl, with a rather pleasing but sometimes sullen expression, and very quick in learning anything, especially languages. This she showed in picking up some Portuguese and Spanish, when left on shore for only a short time at Rio de Janeiro and Monte Video, and in her knowledge of English. York Minster was very jealous of any attention paid to her ; for it was clear he determined to marry her as soon as they were settled on shore.

Although all three could both speak and understand a good deal of English, it was singularly difficult to obtain much information from them concerning the habits of their countrymen : this was partly owing to their apparent difficulty in understanding the simplest alternative. Every one accustomed to very young children, knows how seldom one can get an answer even to so simple a question as whether a thing is black *or* white ; the idea of black or white seems alter-

nately to fill their minds. So it was with these Fuegians, and hence it was generally impossible to find out, by cross-questioning, whether one had rightly understood anything which they had asserted. Their sight was remarkably acute : it is well known that sailors, from long practice, can make out a distant object much better than a landsman ; but both York and Jemmy were much superior to any sailor on board : several times they have declared what some distant object has been, and though doubted by every one, they have proved right, when it has been examined through a telescope. They were quite conscious of this power ; and Jemmy, when he had any little quarrel with the officer on watch, would say, ' Me see ship, me no tell.'

It was interesting to watch the conduct of the savages, when we landed, towards Jemmy Button : they immediately perceived the difference between him and ourselves, and held much conversation one with another on the subject. The old man addressed a long harangue to Jemmy, which it seems was to invite him to stay with them. But Jemmy understood very little of their language, and was, moreover, thoroughly ashamed of his countrymen. When York Minster afterwards came on shore, they noticed him in the same way, and told him he ought to shave ; yet he had not twenty dwarf hairs on his face, whilst we all wore our untrimmed beards. They examined the colour of his skin, and compared it with ours. One of our arms being bared, they expressed the liveliest surprise and admiration at its whiteness, just in the same way in which I have seen the ourang-outang do at the Zoological Gardens. We thought that they mistook two or three of the officers, who were rather

shorter and fairer, though adorned with large beards, for the ladies of our party. The tallest among the Fuegians was evidently much pleased at his height being noticed. When placed back to back with the tallest of the boat's crew, he tried his best to edge on higher ground, and to stand on tiptoe. He opened his mouth to show his teeth, and turned his face for a side view ; and all this was done with such alacrity, that I dare say he thought himself the handsomest man in Tierra del Fuego. After our first feeling of grave astonishment was over, nothing could be more ludicrous than the odd mixture of surprise and imitation which these savages every moment exhibited.

The next day I attempted to penetrate some way into the country. Tierra del Fuego may be described as a mountainous land, partly submerged in the sea, so that deep inlets and bays occupy the place where valleys should exist. The mountain sides, except on the exposed western coast, are covered from the water's edge upwards by one great forest. The trees reach to an elevation of between 1000 and 1500 feet, and are succeeded by a band of peat, with minute alpine plants ; and this again is succeeded by the line of perpetual snow, which, according to Captain King, in the Strait of Magellan descends to between 3000 and 4000 feet. To find an acre of level land in any part of the country is most rare. I recollect only one little flat piece near Port Famine, and another of rather larger extent near Goeree Road. In both places, and everywhere else, the surface is covered by a thick bed of swampy peat. Even within the forest, the ground is concealed by a mass of slowly putrefying

vegetable matter, which, from being soaked with water, yields to the foot.

Finding it nearly hopeless to push my way through the wood, I followed the course of a mountain torrent. At first, from the waterfalls and number of dead trees, I could hardly crawl along ; but the bed of the stream soon became a little more open, from the floods having swept the sides. I continued slowly to advance for an hour along the broken and rocky banks, and was amply repaid by the grandeur of the scene. The gloomy depth of the ravine well accorded with the universal signs of violence. On every side were lying irregular masses of rock and torn-up trees ; other trees, though still erect, were decayed to the heart and ready to fall. The entangled mass of the thriving and the fallen reminded me of the forests within the tropics—yet there was a difference : for in these still solitudes, Death, instead of Life, seemed the predominant spirit. I followed the watercourse till I came to a spot, where a great slip had cleared a straight space down the mountain side. By this road I ascended to a considerable elevation, and obtained a good view of the surrounding woods. The trees all belong to one kind, the *Fagus betuloides* ; for the number of the other species of *Fagus* and of the Winter's Bark, is quite inconsiderable. This beech keeps its leaves throughout the year ; but its foliage is of a peculiar brownish-green colour, with a tinge of yellow. As the whole landscape is thus coloured, it has a sombre, dull appearance ; nor is it often enlivened by the rays of the sun.

One side of the harbour is formed by a hill about 1500 feet high, which Captain Fitz Roy has called after Sir J. Banks, in commemoration of his disastrous ex-

cursion, which proved fatal to two men of his party, and nearly so to Dr. Solander. The snow-storm, which was the cause of their misfortune, happened in the middle of January, corresponding to our July, and in the latitude of Durham ! I was anxious to reach the summit of this mountain to collect alpine plants ; for flowers of any kind in the lower parts are few in number. We followed the same watercourse as on the previous day, till it dwindled away, and we were then compelled to crawl blindly among the trees. These, from the effects of the elevation and of the impetuous winds, were low, thick, and crooked. At length we reached that which from a distance appeared like a carpet of fine green turf, but which, to our vexation, turned out to be a compact mass of little beech-trees about four or five feet high. They were as thick together as box in the border of a garden, and we were obliged to struggle over the flat but treacherous surface. After a little more trouble we gained the peat, and then the bare slate rock.

A ridge connected this hill with another, distant some miles, and more lofty, so that patches of snow were lying on it. As the day was not far advanced, I determined to walk there and collect plants along the road. It would have been very hard work, had it not been for a well-beaten and straight path made by the guanacos ; for these animals, like sheep, always follow the same line. When we reached the hill we found it the highest in the immediate neighbourhood, and the waters flowed to the sea in opposite directions. We obtained a wide view over the surrounding country : to the north a swampy moorland extended, but to the south we had a scene of savage magnificence, well

becoming Tierra del Fuego. There was a degree of mysterious grandeur in mountain behind mountain, with the deep intervening valleys, all covered by one thick, dusky mass of forest. The atmosphere, likewise, in this climate, where gale succeeds gale, with rain, hail, and sleet, seems blacker than anywhere else. In the Strait of Magellan, looking due southward from Port Famine, the distant channels between the mountains appeared from their gloominess to lead beyond the confines of this world.

The *Beagle* got under weigh : and on the succeeding day, favoured to an uncommon degree by a fine easterly breeze, we closed in with the Barnevelts, and running past Cape Deceit with its stony peaks, about three o'clock doubled the weather-beaten Cape Horn. The evening was calm and bright, and we enjoyed a fine view of the surrounding isles. Cape Horn, however, demanded his tribute, and before night sent us a gale of wind directly in our teeth. We stood out to sea, and on the second day again made the land, when we saw on our weather-bow this notorious promontory in its proper form—veiled in a mist, and its dim outline surrounded by a storm of wind and water. Great black clouds were rolling across the heavens, and squalls of rain, with hail, swept by us with such extreme violence, that the Captain determined to run into Wigwam Cove. This is a snug little harbour, not far from Cape Horn ; and here, at Christmas-eve, we anchored in smooth water. The only thing which reminded us of the gale outside, was every now and then a puff from the mountains, which made the ship surge at her anchors.

Close by the cove, a pointed hill, called Kater's Peak, rises to the height of 1700 feet. The surrounding islands all consist of conical masses of greenstone, associated sometimes with less regular hills of baked and altered clay-slate. This part of Tierra del Fuego may be considered as the extremity of the submerged chain of mountains already alluded to. The cove takes its name of 'Wigwam' from some of the Fuegian habitations; but every bay in the neighbourhood might be so called with equal propriety. The inhabitants, living chiefly upon shell-fish, are obliged constantly to change their place of residence; but they return at intervals to the same spots, as is evident from the piles of old shells, which must often amount to many tons in weight. These heaps can be distinguished at a long distance by the bright green colour of certain plants, which invariably grow on them. Among these may be enumerated the wild celery and scurvy grass, two very serviceable plants, the use of which has not been discovered by the natives.

The Fuegian wigwam resembles, in size and dimensions, a haycock. It merely consists of a few broken branches stuck in the ground, and very imperfectly thatched on one side with a few tufts of grass and rushes. The whole cannot be the work of an hour, and it is only used for a few days. At Goeree Roads I saw a place where one of these naked men had slept, which absolutely offered no more cover than the form of a hare. The man was evidently living by himself, and York Minster said he was 'very bad man,' and that probably he had stolen something. On the west coast, however, the wigwams are rather better, for they are covered with seal-skins. We were detained here several

days by the bad weather. The climate is certainly wretched: the summer solstice was now passed, yet every day snow fell on the hills, and in the valleys there was rain, accompanied by sleet. The thermometer generally stood about 45° , but in the night fell to 38° or 40° . From the damp and boisterous state of the atmosphere, not cheered by a gleam of sunshine, one fancied the climate even worse than it really was.

While going one day on shore near Wollaston Island, we pulled alongside a canoe with six Fuegians. These were the most abject and miserable creatures I anywhere beheld. On the east coast the natives, as we have seen, have guanaco cloaks, and on the west, they possess seal-skins. Amongst these central tribes the men generally have an otter-skin, or some small scrap about as large as a pocket-handkerchief, which is barely sufficient to cover their backs as low down as their loins. It is laced across the breast by strings, and according as the wind blows, it is shifted from side to side. But these Fuegians in the canoe were quite naked, and even one full-grown woman was absolutely so. It was raining heavily, and the fresh water, together with the spray, trickled down her body. In another harbour not far distant, a woman, who was suckling a recently-born child, came one day alongside the vessel, and remained there out of mere curiosity, whilst the sleet fell and thawed on her naked bosom, and on the skin of her naked baby! These poor wretches were stunted in their growth, their hideous faces bedaubed with white paint, their skins filthy and greasy, their hair entangled, their voices discordant, and their gestures violent. Viewing such men, one can hardly make

oneself believe that they are fellow-creatures, and inhabitants of the same world. It is a common subject of conjecture what pleasure in life some of the lower animals can enjoy : how much more reasonably the same question may be asked with respect to these barbarians ! At night, five or six human beings, naked and scarcely protected from the wind and rain of this tempestuous climate, sleep on the wet ground coiled up like animals. Whenever it is low water, winter or summer, night or day, they must rise to pick shell-fish from the rocks ; and the women either dive to collect sea-eggs, or sit patiently in their canoes, and with a baited hair-line without any hook, jerk out little fish. If a seal is killed, or the floating carcass of a putrid whale discovered, it is a feast ; and such miserable food is assisted by a few tasteless berries and fungi.

They often suffer from famine : I heard Mr. Low, a sealing-master intimately acquainted with the natives of this country, give a curious account of the state of a party of one hundred and fifty natives on the west coast, who were very thin and in great distress. A succession of gales prevented the women from getting shell-fish on the rocks, and they could not go out in their canoes to catch seal. A small party of these men one morning set out, and the other Indians explained to him, that they were going a four days' journey for food ; on their return, Low went to meet them, and he found them excessively tired, each man carrying a great square piece of putrid whales-blubber with a hole in the middle, through which they put their heads, like the Gauchos do through their ponchos or cloaks. As soon as the blubber was brought into

a wigwam, an old man cut off thin slices, and muttering over them, broiled them for a minute, and distributed them to the famished party, who during this time preserved a profound silence. Mr. Low believes that whenever a whale is cast on shore, the natives bury large pieces of it in the sand, as a resource in time of famine ; and a native boy, whom he had on board, once found a stock thus buried. The different tribes when at war are cannibals. From the concurrent, but quite independent evidence of the boy taken by Mr. Low, and of Jemmy Button, it is certainly true, that when pressed in winter by hunger, they kill and devour their old women before they kill their dogs : the boy, being asked by Mr. Low why they did this, answered, 'Doggies catch otters, old women no.' This boy described the manner in which they are killed by being held over smoke and thus choked ; he imitated their screams as a joke, and described the parts of their bodies which are considered best to eat. Horrid as such a death by the hands of their friends and relatives must be, the fears of the old women, when hunger begins to press, are more painful to think of ; we were told that they then often run away into the mountains, but that they are pursued by the men and brought back to the slaughter-house at their own fire-sides !

Captain Fitz Roy could never ascertain that the Fuegians have any distinct belief in a future life. They sometimes bury their dead in caves, and sometimes in the mountain forests ; we do not know what ceremonies they perform. Jemmy Button would not eat land-birds, because 'eat dead men' : they are unwilling even to mention their dead friends. We

have no reason to believe that they perform any sort of religious worship ; though perhaps the muttering of the old man before he distributed the putrid blubber to his famished party, may be of this nature. Each family or tribe has a wizard or conjuring doctor, whose office we could never clearly ascertain. Jemmy believed in dreams, though not, as I have said, in the devil : I do not think that our Fuegians were much more superstitious than some of the sailors ; for an old quartermaster firmly believed that the successive heavy gales, which we encountered off Cape Horn, were caused by our having the Fuegians on board. The nearest approach to a religious feeling which I heard of, was shown by York Minster, who, when Mr. Bynoe shot some very young ducklings as specimens, declared in the most solemn manner, ‘ Oh, Mr. Bynoe, much rain, snow, blow much.’ This was evidently a retributive punishment for wasting human food. In a wild and excited manner he also related, that his brother, one day whilst returning to pick up some dead birds which he had left on the coast, observed some feathers blown by the wind. His brother said (York imitating his manner), ‘ What that ? ’ and crawling onwards, he peeped over the cliff, and saw a ‘ wild man ’ picking his birds ; he crawled a little nearer, and then hurled down a great stone and killed him. York declared for a long time afterwards storms raged, and much rain and snow fell. As far as we could make out, he seemed to consider the elements themselves as the avenging agents : it is evident in this case, how naturally, in a race a little more advanced in culture, the elements would become personified. What the ‘ bad wild men ’ were, has always appeared to me most mysterious : from

what York said, when we found the place like the form of a hare, where a single man had slept the night before, I should have thought that they were thieves who had been driven from their tribes ; but other obscure speeches made me doubt this ; I have sometimes imagined that the most probable explanation was that they were insane.

The different tribes have no government or chief ; yet each is surrounded by other hostile tribes, speaking different dialects, and separated from each other only by a deserted border or neutral territory ; the cause of their warfare appears to be the means of subsistence. Their country is a broken mass of wild rocks, lofty hills, and useless forests ; and these are viewed through mists and endless storms. The habitable land is reduced to the stones on the beach ; in search of food they are compelled unceasingly to wander from spot to spot, and so steep is the coast, that they can only move about in their wretched canoes. They cannot know the feeling of having a home, and still less that of domestic affection ; for the husband is to the wife a brutal master to a laborious slave. Was a more horrid deed ever perpetrated, than that witnessed on the west coast by Byron, who saw a wretched mother pick up her bleeding dying infant-boy, whom her husband had mercilessly dashed on the stones for dropping a basket of sea-eggs ! How little can the higher powers of the mind be brought into play : what is there for imagination to picture, for reason to compare, for judgment to decide upon ? to knock a limpet from the rock does not require even cunning, that lowest power of the mind. Their skill in some respects may be compared to the instinct of animals ; for it is not improved

by experience : the canoe, their most ingenious work, poor as it is, has remained the same, as we know from Drake, for the last two hundred and fifty years.

Whilst beholding these savages, one asks, whence have they come ? What could have tempted, or what change compelled a tribe of men, to leave the fine regions of the north, to travel down the Cordillera or backbone of America, to invent and build canoes, which are not used by the tribes of Chile, Peru, and Brazil, and then to enter on one of the most inhospitable countries within the limits of the globe ? Although such reflections must at first seize on the mind, yet we may feel sure that they are partly erroneous. There is no reason to believe that the Fuegians decrease in number ; therefore we must suppose that they enjoy a sufficient share of happiness, of whatever kind it may be, to render life worth having. Nature by making habit omnipotent, and its effects hereditary, has fitted the Fuegian to the climate and the productions of his miserable country.

After having been detained six days in Wigwam Cove by very bad weather, we put to sea on the 30th of December. Captain Fitz Roy wished to get westward to land York and Fuegia in their own country. When at sea we had a constant succession of gales, and the current was against us : we drifted to $57^{\circ} 23'$ south. On the 11th of January, 1833, by carrying a press of sail, we fetched within a few miles of the great rugged mountain of York Minster (so called by Captain Cook, and the origin of the name of the elder Fuegian), when a violent squall compelled us to shorten sail and stand out to sea. The surf was breaking fear-

fully on the coast, and the spray was carried over a cliff estimated at 200 feet in height. On the 12th the gale was very heavy, and we did not know exactly where we were: it was a most unpleasant sound to hear constantly repeated, 'keep a good look-out to leeward.' On the 13th the storm raged with its full fury: our horizon was narrowly limited by the sheets of spray borne by the wind. The sea looked ominous, like a dreary waving plain with patches of drifted snow: whilst the ship laboured heavily, the albatross glided with its expanded wings right up the wind. At noon a great sea broke over us, and filled one of the whale-boats, which was obliged to be instantly cut away. The poor *Beagle* trembled at the shock, and for a few minutes would not obey her helm: but soon, like a good ship that she was, she righted and came up to the wind again. Had another sea followed the first, our fate would have been decided soon, and for ever. We had now been twenty-four days trying in vain to get westward; the men were worn out with fatigue, and they had not for many nights or days a dry thing to put on. Captain Fitz Roy gave up the attempt to get westward by the outside coast. In the evening we ran in behind False Cape Horn, and dropped our anchor in forty-seven fathoms, fire flashing from the windlass as the chain rushed round it. How delightful was that still night, after having been so long involved in the din of the warring elements!

The *Beagle* anchored in Goeree Roads. Captain Fitz Roy having resolved to settle the Fuegians, according to their wishes, in Ponsonby Sound, four boats were equipped to carry them there through the *Beagle*

Channel. This channel, which was discovered by Captain Fitz Roy during the last voyage, is a most remarkable feature in the geography of this, or indeed of any other country : it may be compared to the valley of Lochness in Scotland, with its chain of lakes and friths. It is about one hundred and twenty miles long, with an average breadth, not subject to any very great variation, of about two miles ; and is throughout the greater part so perfectly straight, that the view, bounded on each side by a line of mountains, gradually becomes indistinct in the long distance. It crosses the southern part of Tierra del Fuego in an east and west line, and in the middle is joined at right angles on the south side by an irregular channel, which has been called Ponsonby Sound. This is the residence of Jemmy Button's tribe and family.

Three whale-boats and the yawl, with a party of twenty-eight, started under the command of Captain Fitz Roy. In the afternoon we entered the eastern mouth of the channel, and shortly afterwards found a snug little cove concealed by some surrounding islets. Here we pitched our tents and lighted our fires. Nothing could look more comfortable than this scene. The glassy water of the little harbour, with the branches of the trees hanging over the rocky beach, the boats at anchor, the tents supported by the crossed oars, and the smoke curling up the wooded valley, formed a picture of quiet retirement. The next day (20th) we smoothly glided onwards in our little fleet, and came to a more inhabited district. Few if any of these natives could ever have seen a white man ; certainly nothing could exceed their astonishment at the apparition of the four boats. Fires were lighted on every point

(hence the name of Tierra del Fuego, or the land of fire), both to attract our attention and to spread far and wide the news. Some of the men ran for miles along the shore. I shall never forget how wild and savage one group appeared : suddenly four or five men came to the edge of an overhanging cliff ; they were absolutely naked, and their long hair streamed about their faces ; they held rugged staffs in their hands, and, springing from the ground, they waved their arms round their heads, and sent forth the most hideous yells.

At dinner-time we landed among a party of Fuegians. At first they were not inclined to be friendly ; for until the Captain pulled in ahead of the other boats, they kept their slings in their hands. We soon, however, delighted them by trifling presents, such as tying red tape round their heads. They liked our biscuit ; but one of the savages touched with his finger some of the meat preserved in tin cases which I was eating, and feeling it soft and cold, showed as much disgust at it, as I should have done at putrid blubber. Jemmy was thoroughly ashamed of his countrymen, and declared his own tribe were quite different, in which he was woefully mistaken. It was as easy to please as it was difficult to satisfy these savages. Young and old, men and children, never ceased repeating the word ' yammerschooner,' which means ' give me.' After pointing to almost every object, one after the other, even to the buttons on our coats, and saying their favourite word in as many intonations as possible, they would then use it in a neuter sense, and vacantly repeat ' yammerschooner.' After yammerschoonering for any article very eagerly, they would by a simple

artifice point to their young women or little children, as much as to say, 'If you will not give it me, surely you will to such as these.'

At night we endeavoured in vain to find an uninhabited cove; and at last were obliged to bivouac not far from a party of natives. They were very inoffensive as long as they were few in numbers, but in the morning (21st) being joined by others they showed symptoms of hostility, and we thought that we should have come to a skirmish. An European labours under great disadvantages when treating with savages like these, who have not the least idea of the power of fire-arms. In the very act of levelling his musket he appears to the savage far inferior to a man armed with a bow and arrow, a spear, or even a sling. Nor is it easy to teach them our superiority except by striking a fatal blow. Like wild beasts, they do not appear to compare numbers; for each individual, if attacked, instead of retiring, will endeavour to dash your brains out with a stone, as certainly as a tiger under similar circumstances would tear you. Captain Fitz Roy on one occasion being very anxious, from good reasons, to frighten away a small party, first flourished a cutlass near them, at which they only laughed; he then twice fired his pistol close to a native. The man both times looked astounded, and carefully but quickly rubbed his head; he then stared awhile, and gabbled to his companions, but he never seemed to think of running away. We can hardly put ourselves in the position of these savages, and understand their actions. In the case of this Fuegian, the possibility of such a sound as the report of a gun close to his ear could never have entered his mind. He perhaps literally did not

for a second know whether it was a sound or a blow, and therefore very naturally rubbed his head. In a similar manner, when a savage sees a mark struck by a bullet, it may be some time before he is able at all to understand how it is effected ; for the fact of a body being invisible from its velocity would perhaps be to him an idea totally inconceivable. Moreover, the extreme force of a bullet, that penetrates a hard substance without tearing it, may convince the savage that it has no force at all. Certainly I believe that many savages of the lowest grade, such as these of Tierra del Fuego, have seen objects struck, and even small animals killed by the musket, without being in the least aware how deadly an instrument it is.

After having passed an unmolested night, in what would appear to be neutral territory between Jemmy's tribe and the people whom we saw yesterday, we sailed pleasantly along. I do not know anything which shows more clearly the hostile state of the different tribes, than these wide border or neutral tracts. Although Jemmy Button well knew the force of our party, he was, at first, unwilling to land amidst the hostile tribe nearest to his own. He often told us how the savage Oens men 'when the leaf red,' crossed the mountains from the eastern coast of Tierra del Fuego, and made inroads on the natives of this part of the country. It was most curious to watch him when thus talking, and see his eyes gleaming and his whole face assume a new and wild expression. As we proceeded along the Beagle Channel, the scenery assumed a peculiar and very magnificent character ; but the effect was much lessened from the lowness of the point of view in a boat, and from looking along the valley,

and thus losing all the beauty of a succession of ridges. The mountains were here about three thousand feet high, and terminated in sharp and jagged points. They rose in one unbroken sweep from the water's edge, and were covered to the height of fourteen or fifteen hundred feet by the dusky-coloured forest. It was most curious to observe, as far as the eye could range, how level and truly horizontal the line on the mountain side was, at which trees ceased to grow ; it precisely resembled the high-water mark of drift-weed on a sea-beach.

At night we slept close to the junction of Ponsonby Sound with the Beagle Channel. A small family of Fuegians, who were living in the cove, were quiet and inoffensive, and soon joined our party round a blazing fire. We were well clothed, and though sitting close to the fire were far from too warm ; yet these naked savages, though further off, were observed, to our great surprise, to be streaming with perspiration at undergoing such a roasting. They seemed, however, very well pleased, and all joined in the chorus of the seamen's songs : but the manner in which they were invariably a little behindhand was quite ludicrous.

During the night the news had spread, and early in the morning (23rd) a fresh party arrived, belonging to the Tekenika, or Jemmy's tribe. Several of them had run so fast that their noses were bleeding, and their mouths frothed from the rapidity with which they talked ; and with their naked bodies all bedaubed with black, white, and red, they looked like so many demoniacs who had been fighting. We then proceeded (accompanied by twelve canoes, each holding four or five people) down Ponsonby Sound to the spot where

poor Jemmy expected to find his mother and relatives. He had already heard that his father was dead ; but as he had had a ' dream in his head ' to that effect, he did not seem to care much about it, and repeatedly comforted himself with the very natural reflection— ' Me no help it.' He was not able to learn any particulars regarding his father's death, as his relations would not speak about it.

Jemmy was now in a district well known to him, and guided the boats to a quiet pretty cove named Woollya, surrounded by islets, every one of which and every point had its proper native name. We found here a family of Jemmy's tribe, but not his relations : we made friends with them ; and in the evening they sent a canoe to inform Jemmy's mother and brothers. The cove was bordered by some acres of good sloping land, not covered (as elsewhere) either by peat or by forest-trees. Captain Fitz Roy originally intended, as before stated, to have taken York Minster and Fuegia to their own tribe on the west coast ; but as they expressed a wish to remain here, and as the spot was singularly favourable, Captain Fitz Roy determined to settle here the whole party, including Matthews, the missionary. Five days were spent in building for them three large wigwams, in landing their goods, in digging two gardens, and sowing seeds.

The next morning after our arrival (the 24th) the Fuegians began to pour in, and Jemmy's mother and brothers arrived. Jemmy recognised the stentorian voice of one of his brothers at a prodigious distance. The meeting was less interesting than that between a horse, turned out into a field, when he joins an old companion. There was no demonstration of affection ;

they simply stared for a short time at each other ; and the mother immediately went to look after her canoe. We heard, however, through York, that the mother had been inconsolable for the loss of Jemmy, and had searched everywhere for him, thinking that he might have been left after having been taken in the boat. The women took much notice of and were very kind to Fuegia. We had already perceived that Jemmy had almost forgotten his own language. I should think there was scarcely another human being with so small a stock of language, for his English was very imperfect. It was laughable, but almost pitiable, to hear him speak to his wild brother in English, and then ask him in Spanish (' no sabe ? ') whether he did not understand him.

Everything went on peaceably during the three next days, whilst the gardens were digging and wigwams building. We estimated the number of natives at about one hundred and twenty. The women worked hard, whilst the men lounged about all day long, watching us. They asked for everything they saw, and stole what they could. They were delighted at our dancing and singing, and were particularly interested at seeing us wash in a neighbouring brook ; they did not pay much attention to anything else, not even to our boats. Of all the things which York saw, during his absence from his country, nothing seems more to have astonished him than an ostrich, near Maldonado : breathless with astonishment he came running to Mr. Bynoe, with whom he was out walking— ' Oh, Mr. Bynoe, oh, bird all same horse ! ' Much as our white skins surprised the natives, by Mr. Low's account a negro-cook to a sealing vessel, did so more effectually ; and the poor

fellow was so mobbed and shouted at that he would never go on shore again. Everything went on so quietly, that some of the officers and myself took long walks in the surrounding hills and woods. Suddenly, however, on the 27th, every woman and child disappeared. We were all uneasy at this, as neither York nor Jemmy could make out the cause. It was thought by some that they had been frightened by our cleaning and firing off our muskets on the previous evening : by others, that it was owing to offence taken by an old savage, who, when told to keep further off, had coolly spit in the sentry's face, and had then, by gestures acted over a sleeping Fuegian, plainly showed, as it was said, that he should like to cut up and eat our man. Captain Fitz Roy, to avoid the chance of an encounter, which would have been fatal to so many of the Fuegians, thought it advisable for us to sleep at a cove a few miles distant. Matthews, with his usual quiet fortitude (remarkable in a man apparently possessing little energy of character), determined to stay with the Fuegians, who evinced no alarm for themselves ; and so we left them to pass their first awful night.

On our return in the morning (28th) we were delighted to find all quiet, and the men employed in their canoes spearing fish. Captain Fitz Roy determined to send the yawl and one whale-boat back to the ship ; and to proceed with the two other boats, one under his own command (in which he most kindly allowed me to accompany him), and one under Mr. Hammond, to survey the western parts of the Beagle Channel, and afterwards to return and visit the settlement. The day to our astonishment was over-poweringly hot, so that our skins were scorched : with this beautiful weather,

the view in the middle of the Beagle Channel was very remarkable. Looking towards either hand, no object intercepted the vanishing points of this long canal between the mountains. The circumstance of its being an arm of the sea was rendered very evident by several huge whales spouting in different directions. On one occasion I saw two of these monsters, probably male and female, slowly swimming one after the other, within less than a stone's throw of the shore, over which the beech-tree extended its branches.

We sailed on till it was dark, and then pitched our tents in a quiet creek. The greatest luxury was to find for our beds a beach of pebbles, for they were dry and yielded to the body. Peaty soil is damp ; rock is uneven and hard ; sand gets into one's meat, when cooked and eaten boat-fashion ; but when lying in our blanket-bags, on a good bed of smooth pebbles, we passed most comfortable nights.

It was my watch till one o'clock. There is something very solemn in these scenes. At no time does the consciousness in what a remote corner of the world you are then standing, come so strongly before the mind. Every thing tends to this effect ; the stillness of the night is interrupted only by the heavy breathing of the seamen beneath the tents, and sometimes by the cry of a night-bird. The occasional barking of a dog, heard in the distance, reminds one that it is the land of the savage.

Early in the morning we arrived at the point where the Beagle Channel divides into two arms ; and we entered the northern one. The scenery here becomes even grander than before. The lofty mountains on the north side compose the granitic axis, or backbone

of the country, and boldly rise to a height of between three and four thousand feet, with one peak above six thousand feet. They are covered by a wide mantle of perpetual snow, and numerous cascades pour their waters, through the woods, into the narrow channel below. In many parts, magnificent glaciers extend from the mountain side to the water's edge. It is scarcely possible to imagine anything more beautiful than the beryl-like blue of these glaciers, and especially as contrasted with the dead white of the upper expanse of snow. The fragments which had fallen from the glacier into the water, were floating away, and the channel with its icebergs presented, for the space of a mile, a miniature likeness of the Polar Sea. The boats being hauled on shore at our dinner-hour, we were admiring from the distance of half a mile a perpendicular cliff of ice, and were wishing that some more fragments would fall. At last, down came a mass with a roaring noise, and immediately we saw the smooth outline of a wave travelling towards us. The men ran down as quickly as they could to the boats ; for the chance of their being dashed to pieces was evident. One of the seamen just caught hold of the bows, as the curling breaker reached it ; he was knocked over and over, but not hurt ; and the boats, though thrice lifted on high and let fall again, received no damage. This was most fortunate for us, for we were a hundred miles distant from the ship, and we should have been left without provisions or fire-arms. I had previously observed that some large fragments of rock on the beach had been lately displaced ; but until seeing this wave, I did not understand the cause. One side of the creek was formed by a spur of mica-slate ; the

head by a cliff of ice about forty feet high ; and the other side by a promontory fifty feet high, built up of huge rounded fragments of granite and mica-slate, out of which old trees were growing. This promontory was evidently a moraine, heaped up at a period when the glacier had greater dimensions.

When we reached the western mouth of this northern branch of the Beagle Channel we sailed amongst many unknown desolate islands, and the weather was wretchedly bad. We met with no natives. The coast was almost everywhere so steep, that we had several times to pull many miles before we could find space enough to pitch our two tents : one night we slept on large round boulders, with putrefying sea-weed between them ; and when the tide rose, we had to get up and move our blanket-bags. The farthest point westward which we reached was Stewart Island, a distance of about one hundred and fifty miles from our ship. We returned into the Beagle Channel by the southern arm, and thence proceeded, with no adventure, back to Ponsonby Sound.

We arrived at Woollya. Matthews gave so bad an account of the conduct of the Fuegians, that Captain Fitz Roy determined to take him back to the *Beagle* ; and ultimately he was left at New Zealand, where his brother was a missionary. From the time of our leaving, a regular system of plunder commenced ; fresh parties of the natives kept arriving : York and Jemmy lost many things, and Matthews almost every thing which had not been concealed underground. Every article seemed to have been torn up and divided by the natives. Matthews described the watch he was obliged

always to keep as most harassing ; night and day he was surrounded by the natives, who tried to tire him out by making an incessant noise close to his head. One day an old man, whom Matthews asked to leave his wigwam, immediately returned with a large stone in his hand : another day a whole party came armed with stones and stakes, and some of the younger men and Jemmy's brother were crying : Matthews met them with presents. Another party showed by signs that they wished to strip him naked and pluck all the hairs out of his face and body. I think we arrived just in time to save his life. Jemmy's relatives had been so vain and foolish, that they had showed to strangers their plunder, and their manner of obtaining it. It was quite melancholy leaving the three Fuegians with their savage countrymen ; but it was a great comfort that they had no personal fears. York, being a powerful resolute man, was pretty sure to get on well, together with his wife Fuegia. Poor Jemmy looked rather disconsolate, and would then, I have little doubt, have been glad to have returned with us. His own brother had stolen many things from him ; and as he remarked, ‘ what fashion call that : ’ he abused his countrymen, ‘ all bad men, no sabe (know) nothing,’ and, though I never heard him swear before, ‘ damned fools.’ Our three Fuegians, though they had been only three years with civilised men, would, I am sure, have been glad to have retained their new habits ; but this was obviously impossible. I fear it is more than doubtful, whether their visit will have been of any use to them.

In the evening, with Matthews on board, we made sail back to the ship, not by the Beagle Channel, but by the southern coast. The boats were heavily laden

and the sea rough, and we had a dangerous passage. By the evening of the 7th we were on board the *Beagle* after an absence of twenty days, during which time we had gone three hundred miles in the open boats. On the 11th, Captain Fitz Roy paid a visit by himself to the Fuegians and found them going on well ; and that they had lost very few more things.

On the last day of February in the succeeding year (1834), the *Beagle* anchored in a beautiful little cove at the eastern entrance of the Beagle Channel. Captain Fitz Roy determined on the bold, and as it proved, successful attempt to beat against the westerly winds by the same route which we had followed in the boats to the settlement at Woollya. We did not see many natives until we were near Ponsonby Sound, where we were followed by ten or twelve canoes. The natives did not at all understand the reason of our tacking, and, instead of meeting us at each tack, vainly strove to follow us in our zigzag course. I was amused at finding what a difference the circumstance of being quite superior in force made, in the interest of beholding these savages. While in the boats I got to hate the very sound of their voices, so much trouble did they give us. The first and last word was 'yammerschooner.' When, entering some quiet little cove, we have looked round and thought to pass a quiet night, the odious word 'yammerschooner' has shrilly sounded from some gloomy nook, and then the little signal-smoke has curled up to spread the news far and wide. On leaving some place we have said to each other, 'Thank Heaven, we have at last fairly left these wretches !' when one more faint halloo from an all-powerful voice, heard at

a prodigious distance, would reach our ears, and clearly could we distinguish—‘yammerschooner.’ But now, the more Fuegians the merrier ; and very merry work it was. Both parties laughing, wondering, gaping at each other ; we pitying them, for giving us good fish and crabs for rags, &c. ; they grasping at the chance of finding people so foolish as to exchange such splendid ornaments for a good supper. It was most amusing to see the undisguised smile of satisfaction with which one young woman with her face painted black, tied several bits of scarlet cloth round her head with rushes. Her husband, who enjoyed the very universal privilege in this country of possessing two wives, evidently became jealous of all the attention paid to his young wife ; and, after a consultation with his naked beauties, was paddled away by them.

Some of the Fuegians plainly showed that they had a fair notion of barter. I gave one man a large nail (a most valuable present) without making any signs for a return ; but he immediately picked out two fish, and handed them up on the point of his spear. If any present was designed for one canoe, and it fell near another, it was invariably given to the right owner. The Fuegian boy, whom Mr. Low had on board, showed, by going into the most violent passion, that he quite understood the reproach of being called a liar, which in truth he was. We were this time, as on all former occasions, much surprised at the little notice, or rather none whatever, which was taken of many things, the use of which must have been evident to the natives. Simple circumstances—such as the beauty of scarlet cloth or blue beads, the absence of women, our care in washing ourselves—excited their admiration far

more than any grand or complicated object, such as our ship. Bougainville has well remarked concerning these people, that they treat the '*chef-d'œuvres de l'industrie humaine, comme ils traitent les loix de la nature et ses phénomènes.*'

On the 5th of March, we anchored in the cove at Woollya, but we saw not a soul there. We were alarmed at this, for the natives in Ponsonby Sound showed by gestures, that there had been fighting ; and we afterwards heard that the dreaded Oens men had made a descent. Soon a canoe, with a little flag flying, was seen approaching, with one of the men in it washing the paint off his face. This man was poor Jemmy—now a thin haggard savage, with long disordered hair, and naked, except a bit of a blanket round his waist. We did not recognise him till he was close to us ; for he was ashamed of himself, and turned his back to the ship. We had left him plump, fat, clean, and well dressed ; I never saw so complete and grievous a change. As soon however as he was clothed, and the first flurry was over, things wore a good appearance. He dined with Captain Fitz Roy, and ate his dinner as tidily as formerly. He told us he had " too much " (meaning enough) to eat, that he was not cold, that his relations were very good people, and that he did not wish to go back to England : in the evening we found out the cause of this great change in Jemmy's feelings, in the arrival of his young and nice-looking wife. With his usual good feeling, he brought two beautiful otter-skins for two of his best friends, and some spear-heads and arrows made with his own hands for the Captain. He said he had built a canoe for himself, and he boasted that he could talk a little of his own language ! But

it is a most singular fact, that he appears to have taught all his tribe some English : an old man spontaneously announced 'Jemmy Button's wife.' Jemmy had lost all his property. He told us that York Minster had built a large canoe, and with his wife Fuegia, had several months since gone to his own country, and had taken farewell by an act of consummate villainy—he persuaded Jemmy and his mother to come with him, and then on the way deserted them by night, stealing every article of their property.

Jemmy went to sleep on shore, and in the morning returned, and remained on board till the ship got under weigh, which frightened his wife, who continued crying violently till he got into his canoe. He returned loaded with valuable property. Every soul on board was heartily sorry to shake hands with him for the last time. I do not now doubt that he will be as happy as, perhaps happier than, if he had never left his own country. Every one must sincerely hope that Captain Fitz Roy's noble hope may be fulfilled, of being rewarded for the many generous sacrifices which he made for these Fuegians, by some shipwrecked sailor being protected by the descendants of Jemmy Button and his tribe ! When Jemmy reached the shore, he lighted a signal fire, and the smoke curled up, bidding us a last and long farewell, as the ship stood on her course into the open sea.

The perfect equality among the individuals composing the Fuegian tribes, must for a long time retard their civilisation. As we see those animals, whose instinct compels them to live in society and obey a chief, are most capable of improvement, so is it with the races

of mankind. Whether we look at it as a cause or a consequence, the more civilised always have the most artificial governments. For instance, the inhabitants of Otaheite, who, when first discovered, were governed by hereditary kings, had arrived at a far higher grade than another branch of the same people, the New Zealanders—who, although benefited by being compelled to turn their attention to agriculture, were republicans in the most absolute sense. In Tierra del Fuego, until some chief shall arise with power sufficient to secure any acquired advantage, such as the domesticated animals, it seems scarcely possible that the political state of the country can be improved. At present, even a piece of cloth given to one is torn into shreds and distributed ; and no one individual becomes richer than another. On the other hand, it is difficult to understand how a chief can arise till there is property of some sort by which he might manifest his superiority and increase his power.

I believe, in this extreme part of South America, man exists in a lower state of improvement than in any other part of the world. The South Sea Islanders of the two races inhabiting the Pacific, are comparatively civilised. The Esquimaux, in his subterranean hut, enjoys some of the comforts of life, and in his canoe, when full equipped, manifests much skill. Some of the tribes of Southern Africa, prowling about in search of roots, and living concealed on the wild and arid plains, are sufficiently wretched. The Australian, in the simplicity of the arts of life, comes nearest the Fuegian : he can, however, boast of his boomerang, his spear and throwing-stick, his method of climbing trees, of tracking animals, and of hunting. Although

the Australian may be superior in acquirements, it by no means follows that he is likewise superior in mental capacity : indeed, from what I saw of the Fuegians when on board, and from what I have read of the Australians, I should think the case was exactly the reverse.

2. AN EARTHQUAKE

This day has been memorable in the annals of Valdivia, for the most severe earthquake experienced by the oldest inhabitant. I happened to be on shore, and was lying down in the wood to rest myself. It came on suddenly, and lasted two minutes, but the time appeared much longer. The rocking of the ground was very sensible. The undulations appeared to my companion and myself to come from due east, whilst others thought they proceeded from south-west : this shows how difficult it sometimes is to perceive the direction of the vibrations. There was no difficulty in standing upright, but the motion made me almost giddy : it was something like the movement of a vessel in a little cross-ripple, or still more like that felt by a person skating over thin ice, which bends under the weight of his body.

A bad earthquake at once destroys our oldest associations : the earth, the very emblem of solidity, has moved beneath our feet like a thin crust over a fluid ;—one second of time has created in the mind a strange idea of insecurity, which hours of reflection would not have produced. In the forest, as a breeze moved the trees, I felt only the earth tremble but saw no other effect. Captain Fitz Roy and some officers were at the town during the shock, and there the scene was more striking ; for although the houses, from being

built of wood, did not fall, they were violently shaken, and the boards creaked and rattled together. The people rushed out of doors in the greatest alarm. It is these accompaniments that create that perfect horror of earthquakes, experienced by all who have thus seen, as well as felt, their effects. Within the forest it was a deeply interesting, but by no means an awe-inspiring phenomenon. The tides were very curiously affected. The great shock took place at the time of low water ; and an old woman who was on the beach told me, that the water flowed very quickly, but not in great waves, to high-water mark, and then as quickly returned to its proper level ; this was also evident by the line of wet sand. This same kind of quick but quiet movement in the tide, happened a few years since at Chiloe, during a slight earthquake, and created much causeless alarm. In the course of the evening there were many weaker shocks, which seemed to produce in the harbour the most complicated currents, and some of great strength.

We entered the harbour of Concepcion. While the ship was beating up to the anchorage, I landed on the island of Quiriquina. The mayor-domo of the estate quickly rode down to tell me the terrible news of the great earthquake of the 20th :—‘ That not a house in Concepcion or Talcahuano (the port) was standing ; that seventy villages were destroyed ; and that a great wave had almost washed away the ruins of Talcahuano.’ Of this latter statement I soon saw abundant proofs—the whole coast being strewn over with timber and furniture as if a thousand ships had been wrecked. Besides chairs, tables, book-shelves, &c., in great

numbers, there were several roofs of cottages, which had been transported almost whole. The store-houses at Talcahuano had been burst open, and great bags of cotton, yerba, and other valuable merchandise were scattered on the shore. During my walk round the island, I observed that numerous fragments of rock, which, from the marine productions adhering to them, must recently have been lying in deep water, had been cast up high on the beach ; one of these was six feet long, three broad, and two thick.

The island itself as plainly showed the overwhelming power of the earthquake, as the beach did that of the consequent great wave. The ground in many parts was fissured in north and south lines, perhaps caused by the yielding of the parallel and steep sides of this narrow island. Some of the fissures near the cliffs were a yard wide. Many enormous masses had already fallen on the beach ; and the inhabitants thought that when the rains commenced far greater slips would happen. The effect of the vibration on the hard primary slate, which composes the foundation of the island, was still more curious : the superficial parts of some narrow ridges were as completely shivered as if they had been blasted by gunpowder. This effect, which was rendered conspicuous by the fresh fractures and displaced soil, must be confined to near the surface, for otherwise there would not exist a block of solid rock throughout Chile ; nor is this improbable, as it is known that the surface of a vibrating body is affected differently from the central part. It is, perhaps, owing to this same reason, that earthquakes do not cause quite such terrific havoc within deep mines as would be expected. I believe this convulsion has been more

effectual in lessening the size of the island of Quiriquina, than the ordinary wear-and-tear of the sea and weather during the course of a whole century.

The next day I landed at Talcahuano, and afterwards rode to Concepcion. Both towns presented the most awful yet interesting spectacle I ever beheld. To a person who had formerly known them, it possibly might have been still more impressive ; for the ruins were so mingled together, and the whole scene possessed so little the air of a habitable place, that it was scarcely possible to imagine its former condition. The earthquake commenced at half-past eleven o'clock in the forenoon. If it had happened in the middle of the night, the greater number of the inhabitants (which in this one province amount to many thousands) must have perished, instead of less than a hundred : as it was, the invariable practice of running out of doors at the first trembling of the ground, alone saved them. In Concepcion each house, or row of houses, stood by itself, a heap or line of ruins ; but in Talcahuano, owing to the great wave, little more than one layer of bricks, tiles, and timber, with here and there part of a wall left standing, could be distinguished. From this circumstance Concepcion, although not so completely desolated, was a more terrible, and, if I may so call it, picturesque sight. The first shock was very sudden. The mayor-domo at Quiriquina told me, that the first notice he received of it, was finding both the horse he rode and himself, rolling together on the ground. Rising up, he was again thrown down. He also told me that some cows which were standing on the steep side of the island were rolled into the sea. The great wave caused the destruction of many cattle ;

on one low island, near the head of the bay, seventy animals were washed off and drowned. It is generally thought that this has been the worst earthquake ever recorded in Chile ; but as the very severe ones occur only after long intervals, this cannot easily be known ; nor indeed would a much worse shock have made any great difference, for the ruin was now complete. Innumerable small tremblings followed the great earthquake, and within the first twelve days no less than three hundred were counted.

After viewing Concepcion, I cannot understand how the greater number of inhabitants escaped unhurt. The houses in many parts fell outwards ; thus forming in the middle of the streets little hillocks of brickwork and rubbish. Mr. Rouse, the English consul, told us that he was at breakfast when the first movement warned him to run out. He had scarcely reached the middle of the courtyard, when one side of his house came thundering down. He retained presence of mind to remember, that if he once got on the top of that part which had already fallen, he would be safe. Not being able from the motion of the ground to stand, he crawled up on his hands and knees ; and no sooner had he ascended this little eminence, than the other side of the house fell in, the great beams sweeping close in front of his head. With his eyes blinded, and his mouth choked with the cloud of dust which darkened the sky, at last he gained the street. As shock succeeded shock, at the interval of a few minutes, no one dared approach the shattered ruins ; and no one knew whether his dearest friends and relations were not perishing from the want of help. Those who had saved any property were obliged to keep a constant watch, for thieves

prowled about, and at each little trembling of the ground, with one hand they beat their breasts and cried 'misericordia !' and then with the other filched what they could from the ruins. The thatched roofs fell over the fires, and flames burst forth in all parts. Hundreds knew themselves ruined, and few had the means of providing food for the day.

Earthquakes alone are sufficient to destroy the prosperity of any country. If beneath England the now inert subterranean forces should exert those powers, which most assuredly in former geological ages they have exerted, how completely would the entire condition of the country be changed ! What would become of the lofty houses, thickly packed cities, great manufactories, the beautiful public and private edifices ? If the new period of disturbance were first to commence by some great earthquake in the dead of the night, how terrific would be the carnage ! England would at once be bankrupt ; all papers, records, and accounts would from that moment be lost. Government being unable to collect the taxes, and failing to maintain its authority, the hand of violence and rapine would remain uncontrolled. In every large town famine would go forth, pestilence and death following in its train.

Shortly after the shock, a great wave was seen from the distance of three or four miles, approaching in the middle of the bay with a smooth outline ; but along the shore it tore up cottages and trees, as it swept onwards with irresistible force. At the head of the bay it broke in a fearful line of white breakers, which rushed up to a height of 23 vertical feet above the highest spring-tides. Their force must have been prodigious ; for at the Fort a cannon with its carriage,

estimated at four tons in weight, was moved 15 feet inwards. A schooner was left in the midst of the ruins, 200 yards from the beach. The first wave was followed by two others, which in their retreat carried away a vast wreck of floating objects. In one part of the bay, a ship was pitched high and dry on shore, was carried off, again driven on shore, and again carried off. In another part, two large vessels anchored near together were whirled about, and their cables were thrice wound round each other : though anchored at a depth of 36 feet, they were for some minutes aground. The great wave must have travelled slowly, for the inhabitants of Talcahuano had time to run up the hills behind the town ; and some sailors pulled out seaward, trusting successfully to their boat riding securely over the swell, if they could reach it before it broke. One old woman with a little boy, four or five years old, ran into a boat, but there was nobody to row it out : the boat was consequently dashed against an anchor and cut in twain ; the old woman was drowned, but the child was picked up some hours afterwards clinging to the wreck. Pools of salt-water were still standing amidst the ruins of the houses, and children, making boats with old tables and chairs, appeared as happy as their parents were miserable. It was, however, exceedingly interesting to observe, how much more active and cheerful all appeared than could have been expected. It was remarked with much truth, that from the destruction being universal, no one individual was humbled more than another, or could suspect his friends of coldness—that most grievous result of the loss of wealth. Mr. Rouse, and a large party whom he kindly took under his protection, lived for the first week in a garden

beneath some apple-trees. At first they were as merry as if it had been a picnic ; but soon afterwards heavy rain caused much discomfort, for they were absolutely without shelter.

In Captain Fitz Roy's excellent account of the earthquake, it is said that two explosions, one like a column of smoke and another like the blowing of a great whale, were seen in the bay. The water also appeared every where to be boiling ; and it ' became black, and exhaled a most disagreeable sulphureous smell.' These latter circumstances were observed in the Bay of Valparaiso during the earthquake of 1822 ; they may, I think, be accounted for, by the disturbance of the mud at the bottom of the sea containing organic matter in decay. In the Bay of Callao, during a calm day, I noticed, that as the ship dragged her cable over the bottom, its course was marked by a line of bubbles. The lower orders in Talcahuano thought that the earthquake was caused by some old Indian women, who two years ago, being offended, stopped the volcano of Antuco. This silly belief is curious, because it shows that experience had taught them to observe, that there exists a relation between the suppressed action of the volcanoes, and the trembling of the ground. It was necessary to apply the witchcraft to the point where their perception of cause and effect failed ; and this was the closing of the volcanic vent. This belief is the more singular in this particular instance, because, according to Captain Fitz Roy, there is reason to believe that Antuco was noways affected.

The town of Concepcion was built in the usual Spanish fashion, with all the streets running at right angles to each other ; one set ranging S.W. by W.,

and the other set N.W. by N. The walls in the former direction certainly stood better than those in the latter : the greater number of the masses of brickwork were thrown down towards the N.E. Both these circumstances perfectly agree with the general idea, of the undulations having come from the S.W. ; in which quarter subterranean noises were also heard : for it is evident that the walls running S.W. and N.E. which presented their ends to the point whence the undulations came, would be much less likely to fall than those walls which, running N.W. and S.E., must in their whole lengths have been at the same instant thrown out of the perpendicular ; for the undulations, coming from the S.W., must have extended in N.W. and S.E. waves, as they passed under the foundations. This may be illustrated by placing books edgewise on a carpet, and then, after the manner suggested by Michell, imitating the undulations of an earthquake : it will be found that they fall with more or less readiness, according as their direction more or less nearly coincides with the line of the waves. The fissures in the ground generally, though not uniformly, extended in a S.E. and N.W. direction ; and therefore corresponded to the lines of undulation or of principal flexure. Bearing in mind all these circumstances, which so clearly point to the S.W. as the chief focus of disturbance, it is a very interesting fact that the island of S. Maria, situated in that quarter, was, during the general uplifting of the land, raised to nearly three times the height of any other part of the coast.

The different resistance offered by the walls, according to their direction, was well exemplified in the case of the Cathedral. The side which fronted the N.E.

presented a grand pile of ruins, in the midst of which door-cases and masses of timber stood up, as if floating in a stream. Some of the angular blocks of brickwork were of great dimensions ; and they were rolled to a distance on the level plaza, like fragments of rock at the base of some high mountain. The side walls (running S.W. and N.E.), though exceedingly fractured, yet remained standing ; but the vast buttresses (at right angles to them, and therefore parallel to the walls that fell) were in many cases cut clean off, as if by a chisel, and hurled to the ground. Some square ornaments on the coping of these same walls, were moved by the earthquake into a diagonal position. A similar circumstance was observed after an earthquake at Valparaiso, Calabria, and other places, including some of the ancient Greek temples. This twisting displacement, at first appears to indicate a vorticose movement beneath each point thus affected ; but this is highly improbable. May it not be caused by a tendency in each stone to arrange itself in some particular position, with respect to the lines of vibration—in a manner somewhat similar to pins on a sheet of paper when shaken ? Generally speaking, arched doorways or windows stood much better than any other part of the buildings. Nevertheless, a poor lame old man, who had been in the habit, during trifling shocks, of crawling to a certain doorway, was this time crushed to pieces.

I have not attempted to give any detailed description of the appearance of Concepcion, for I feel that it is quite impossible to convey the mingled feelings which I experienced. Several of the officers visited it before me, but their strongest language failed to give a just idea of the scene of desolation. It is a bitter and

humiliating thing to see works, which have cost man so much time and labour, overthrown in one minute ; yet compassion for the inhabitants was almost instantly banished, by the surprise in seeing a state of things produced in a moment of time, which one was accustomed to attribute to a succession of ages. In my opinion, we have scarcely beheld, since leaving England, any sight so deeply interesting.

In almost every severe earthquake, the neighbouring waters of the sea are said to have been greatly agitated. The disturbance seems generally, as in the case of Concepcion, to have been of two kinds : first, at the instant of the shock, the water swells high up on the beach with a gentle motion, and then as quietly retreats ; secondly, some time afterwards, the whole body of the sea retires from the coast, and then returns in waves of overwhelming force. The first movement seems to be an immediate consequence of the earthquake affecting differently a fluid and a solid, so that their respective levels are slightly deranged : but the second case is a far more important phenomenon. During most earthquakes, and especially during those on the west coast of America, it is certain that the first great movement of the waters has been a retirement. Some authors have attempted to explain this, by supposing that the water retains its level, whilst the land oscillates upwards ; but surely the water close to the land, even on a rather steep coast, would partake of the motion of the bottom : moreover, as urged by Mr. Lyell, similar movements of the sea have occurred at islands far distant from the chief line of disturbance, as was the case with Juan Fernandez during this earthquake, and with Madeira during the famous Lisbon

shock. I suspect (but the subject is a very obscure one) that a wave, however produced, first draws the water from the shore, on which it is advancing to break : I have observed that this happens with the little waves from the paddles of a steam-boat. It is remarkable that whilst Talcahuano and Callao (near Lima), both situated at the head of large shallow bays, have suffered during every severe earthquake from great waves, Valparaiso, seated close to the edge of profoundly deep water, has never been overwhelmed, though so often shaken by the severest shocks. From the great wave not immediately following the earthquake, but sometimes after the interval of even half an hour, and from distant islands being affected similarly with the coasts near the focus of the disturbance, it appears that the wave first rises in the offing ; and as this is of general occurrence, the cause must be general : I suspect we must look to the line, where the less disturbed waters of the deep ocean join the water nearer the coast, which has partaken of the movements of the land, as the place where the great wave is first generated ; it would also appear that the wave is larger or smaller, according to the extent of shoal water which has been agitated together with the bottom on which it rested.

The most remarkable effect of this earthquake was the permanent elevation of the land ; it would probably be far more correct to speak of it as the cause. There can be no doubt that the land round the Bay of Concepcion was upraised two or three feet ; but it deserves notice, that owing to the wave having obliterated the old lines of tidal action on the sloping sandy shores, I could discover no evidence of this fact,

except in the united testimony of the inhabitants, that one little rocky shoal, now exposed, was formerly covered with water. At the island of S. Maria (about thirty miles distant) the elevation was greater; on one part, Captain Fitz Roy found beds of putrid mussel-shells *still adhering to the rocks*, ten feet above high-water mark: the inhabitants had formerly dived at low-water spring-tides for these shells. The elevation of this province is particularly interesting, from its having been the theatre of several other violent earthquakes, and from the vast numbers of sea-shells scattered over the land, up to a height of certainly 600, and I believe, of 1000 feet. At Valparaiso, as I have remarked, similar shells are found at the height of 1300 feet: it is hardly possible to doubt that this great elevation has been effected by successive small up-risings, such as that which accompanied or caused the earthquake of this year, and likewise by an insensibly slow rise, which is certainly in progress on some parts of this coast.

The island of Juan Fernandez, 360 miles to the N.E., was, at the time of the great shock of the 20th, violently shaken, so that the trees beat against each other, and a volcano burst forth under water close to the shore: these facts are remarkable because this island, during the earthquake of 1751, was then also affected more violently than other places at an equal distance from Concepcion, and this seems to show some subterranean connection between these two points. Chiloe, about 340 miles southward of Concepcion, appears to have been shaken more strongly than the intermediate district of Valdivia, where the volcano of Villarica was noways affected, whilst in the Cordillera in front of

Chiloe, two of the volcanoes burst forth at the same instant in violent action. These two volcanoes, and some neighbouring ones, continued for a long time in eruption, and ten months afterwards were again influenced by an earthquake at Concepcion. Some men, cutting wood near the base of one of these volcanoes, did not perceive the shock of the 20th, although the whole surrounding Province was then trembling; here we have an eruption relieving and taking the place of an earthquake, as would have happened at Concepcion, according to the belief of the lower orders, if the volcano of Antuco had not been closed by witchcraft. Two years and three quarters afterwards, Valdivia and Chiloe were again shaken, more violently than on the 20th, and an island in the Chonos Archipelago was permanently elevated more than eight feet. It will give a better idea of the scale of these phenomena, if (as in the case of the glaciers) we suppose them to have taken place at corresponding distances in Europe:—then would the land from the North Sea to the Mediterranean have been violently shaken, and at the same instant of time a large tract of the eastern coast of England would have been permanently elevated, together with some outlying islands—a train of volcanoes on the coast of Holland would have burst forth in action, and an eruption taken place at the bottom of the sea, near the northern extremity of Ireland—and lastly, the ancient vents of Auvergne, Cantal, and Mont d'Or would each have sent up to the sky a dark column of smoke, and have long remained in fierce action. Two years and three quarters afterwards, France, from its centre to the English Channel, would have been again desolated by an earthquake,

and an island permanently upraised in the Mediterranean.

The space, from under which volcanic matter on the 20th was actually erupted, is 720 miles in one line, and 400 miles in another line at right angles to the first: hence, in all probability, a subterranean lake of lava is here stretched out, of nearly double the area of the Black Sea. From the intimate and complicated manner in which the elevatory and eruptive forces were shown to be connected during this train of phenomena, we may confidently come to the conclusion, that the forces which slowly and by little starts uplift continents, and those which at successive periods pour forth volcanic matter from open orifices, are identical. From many reasons, I believe that the frequent quakings of the earth on this line of coast, are caused by the rending of the strata, necessarily consequent on the tension of the land when upraised, and their injection by fluidified rock. This rending and injection would, if repeated often enough (and we know that earthquakes repeatedly affect the same areas in the same manner), form a chain of hills;—and the linear island of St. Mary, which was upraised thrice the height of the neighbouring country, seems to be undergoing this process. I believe that the solid axis of a mountain differs in its manner of formation from a volcanic hill, only in the molten stone having been repeatedly injected, instead of having been repeatedly ejected. Moreover, I believe that it is impossible to explain the structure of great mountain-chains, such as that of the Cordillera, where the strata, capping the injected axis of plutonic rock, have been thrown on their edges along several parallel and neigh-

bouring lines of elevation, except on this view of the rock of the axis having been repeatedly injected, after intervals sufficiently long to allow the upper parts or wedges to cool and become solid ;—for if the strata had been thrown into their present highly-inclined, vertical, and even inverted positions, by a single blow, the very bowels of the earth would have gushed out ; and instead of beholding abrupt mountain-axes of rock solidified under great pressure, deluges of lava would have flowed out at innumerable points on every line of elevation.

3. THE PAMPAS AND THE CORDILLERA

Early in the morning I climbed up a mountain on one side of the valley, and enjoyed a far extended view over the Pampas. This was a spectacle to which I had always looked forward with interest, but I was disappointed : at the first glance it much resembled a distant view of the ocean, but in the northern parts many irregularities were soon distinguishable. The most striking feature consisted in the rivers, which, facing the rising sun, glittered like silver threads, till lost in the immensity of the distance. At midday we descended the valley, and reached a hovel, where an officer and three soldiers were posted to examine passports. One of these men was a thoroughbred Pampas Indian : he was kept much for the same purpose as a bloodhound, to track out any person who might pass by secretly, either on foot or horseback. Some years ago, a passenger endeavoured to escape detection, by making a long circuit over a neighbouring mountain ; but this Indian, having by chance crossed

his track, followed it for the whole day over dry and very stony hills, till at last he came on his prey hidden in a gully. We here heard that the silvery clouds, which we had admired from the bright region above, had poured down torrents of rain. The valley from this point gradually opened, and the hills became mere water-worn hillocks compared to the giants behind : it then expanded into a gently-sloping plain of shingle, covered with low trees and bushes. This talus, although appearing narrow, must be nearly ten miles wide before it blends into the apparently dead level Pampas. We passed the only house in this neighbourhood, the Estancia of Chaquaio ; and at sunset we pulled up in the first snug corner, and there bivouacked.

I was reminded of the Pampas of Buenos Ayres, by seeing the disk of the rising sun, intersected by an horizon, level as that of the ocean. During the night a heavy dew fell, a circumstance which we did not experience within the Cordillera. The road proceeded for some distance due east across a low swamp ; then meeting the dry plain, it turned to the north towards Mendoza. The distance is two very long days' journey. Our first day's journey was called fourteen leagues to Estacado, and the second seventeen to Luxan, near Mendoza. The whole distance is over a level desert plain, with not more than two or three houses. The sun was exceedingly powerful, and the ride devoid of all interest. There is very little water in this 'traversia,' and in our second day's journey we found only one little pool. Little water flows from the mountains, and it soon becomes absorbed by the dry and porous soil ; so that, although we travelled at the distance of only

ten or fifteen miles from the outer range of the Cordillera, we did not cross a single stream. In many parts the ground was incrustated with a saline efflorescence ; hence we had the same salt-loving plants, which are common near Bahia Blanca. The landscape has a uniform character from the Strait of Magellan, along the whole eastern coast of Patagonia, to the Rio Colorado ; and it appears that the same kind of country extends inland from this river, in a sweeping line as far as San Luis, and perhaps even further north. To the eastward of this curved line, lies the basin of the comparatively damp and green plains of Buenos Ayres. The sterile plains of Mendoza and Patagonia consist of a bed of shingle, worn smooth and accumulated by the waves of the sea ; while the Pampas, covered by thistles, clover, and grass, have been formed by the ancient estuary mud of the Plata.

After our two days' tedious journey, it was refreshing to see in the distance the rows of poplars and willows growing round the village and river of Luxan. Shortly before we arrived at this place, we observed to the south a ragged cloud of a dark reddish-brown colour. At first we thought that it was smoke from some great fire on the plains ; but we soon found that it was a swarm of locusts. They were flying northward ; and with the aid of a light breeze, they overtook us at a rate of ten or fifteen miles an hour. The main body filled the air from a height of twenty feet, to that, as it appeared, of two or three thousand above the ground ; ' and the sound of their wings was as the sound of chariots of many horses running to battle : ' or rather, I should say, like a strong breeze passing through the rigging of a ship. The sky, seen through the advanced

guard, appeared like a mezzotinto engraving, but the main body was impervious to sight ; they were not, however, so thick together, but that they could escape a stick waved backwards and forwards. When they alighted, they were more numerous than the leaves in the field, and the surface became reddish instead of being green : the swarm having once alighted, the individuals flew from side to side in all directions. Locusts are not an uncommon pest in this country : already during this season, several smaller swarms had come up from the south, where, as apparently in all other parts of the world, they are bred in the deserts. The poor cottagers in vain attempted by lighting fires, by shouts, and by waving branches to avert the attack. This species of locust closely resembles, and perhaps is identical with the famous *Gryllus migratorius* of the East.

We crossed the Luxan, which is a river of considerable size, though its course towards the sea-coast is very imperfectly known : it is even doubtful whether, in passing over the plains, it is not evaporated and lost. We slept in the village of Luxan, which is a small place surrounded by gardens, and forms the most southern cultivated district in the Province of Mendoza ; it is five leagues south of the capital. At night I experienced an attack (for it deserves no less a name) of the *Benchuca*, a species of *Reduvius*, the great black bug of the Pampas. It is most disgusting to feel soft wingless insects, about an inch long, crawling over one's body. Before sucking they are quite thin, but afterwards they become round and bloated with blood, and in this state are easily crushed. One which I caught at Iquique, (for they are found in Chile and Peru,) was very empty. When placed on a table, and though

surrounded by people, if a finger was presented, the bold insect would immediately protrude its sucker, make a charge, and if allowed, draw blood. No pain was caused by the wound. It was curious to watch its body during the act of sucking, as in less than ten minutes it changed from being as flat as a wafer to a globular form. This one feast, for which the benchuca was indebted to one of the officers, kept it fat during four whole months ; but, after the first fortnight, it was quite ready to have another suck.

We rode on to Mendoza. The country was beautifully cultivated, and resembled Chile. This neighbourhood is celebrated for its fruit ; and certainly nothing could appear more flourishing than the vineyards and the orchards of figs, peaches, and olives. We bought water-melons nearly twice as large as a man's head, most deliciously cool and well-flavoured, for a halfpenny apiece ; and for the value of threepence, half a wheelbarrowful of peaches. The cultivated and enclosed part of this province is very small ; there is little more than that which we passed through between Luxan and the Capital. The land, as in Chile, owes its fertility entirely to artificial irrigation ; and it is really wonderful to observe how extraordinarily productive a barren traversia is thus rendered.

We stayed the ensuing day in Mendoza. The prosperity of the place has much declined of late years. The inhabitants say ' it is good to live in, but very bad to grow rich in.' The lower orders have the lounging, reckless manners of the Gauchos of the Pampas ; and their dress, riding-gear, and habits of life, are nearly the same. To my mind the town had a stupid, forlorn aspect. Neither the boasted alameda, nor the

scenery, is at all comparable with that of Santiago ; but to those who, coming from Buenos Ayres, have just crossed the unvaried Pampas, the gardens and orchards must appear delightful. Sir F. Head, speaking of the inhabitants, says, ' They eat their dinners, and it is so very hot, they go to sleep—and could they do better ? ' I quite agree with Sir F. Head : the happy doom of the Mendozinos is to eat, sleep, and be idle.

We set out on our return to Chile, by the Uspallata pass situated north of Mendoza. We had to cross a long and most sterile traversia of fifteen leagues. The soil in parts was absolutely bare, in others covered by numberless dwarf cacti, armed with formidable spines, and called by the inhabitants ' little lions.' There were, also, a few low bushes. Although the plain is nearly three thousand feet above the sea, the sun was very powerful ; and the heat, as well as the clouds of impalpable dust, rendered the travelling extremely irksome. Our course during the day lay nearly parallel to the Cordillera, but gradually approaching them. Before sunset we entered one of the wide valleys, or rather bays, which open on the plain : this soon narrowed into a ravine, where a little higher up the house of Villa Vicencio is situated. As we had ridden all day without a drop of water, both our mules and selves were very thirsty, and we looked out anxiously for the stream which flows down this valley. It was curious to observe how gradually the water made its appearance : on the plain the course was quite dry ; by degrees it became a little damper ; then puddles of water appeared ; these soon became connected ; and at Villa Vicencio there was a nice little rivulet.

It required little geological practice to interpret the marvellous story which this scene at once unfolded ; though I confess I was at first so much astonished, that I could scarcely believe the plainest evidence. I saw the spot where a cluster of fine trees once waved their branches on the shores of the Atlantic, when that ocean (now driven back 700 miles) came to the foot of the Andes. I saw that they had sprung from a volcanic soil which had been raised above the level of the sea, and that subsequently this dry land, with its upright trees, had been let down into the depths of the ocean. In these depths, the formerly dry land was covered by sedimentary beds, and these again by enormous streams of submarine lava—one such mass attaining the thickness of a thousand feet ; and these deluges of molten stone and aqueous deposits five times alternately had been spread out. The ocean which received such thick masses, must have been profoundly deep ; but again the subterranean forces exerted themselves, and I now beheld the bed of that ocean, forming a chain of mountains more than seven thousand feet in height. Nor had those antagonistic forces been dormant, which are always at work wearing down the surface of the land : the great piles of strata had been intersected by many wide valleys, and the trees, now changed into silex, were exposed projecting from the volcanic soil, now changed into rock, whence formerly, in a green and budding state, they had raised their lofty heads. Now, all is utterly irreclaimable and desert ; even the lichen cannot adhere to the stony casts of former trees. Vast, and scarcely comprehensible as such changes must ever appear, yet they have all occurred within a period, recent when compared with the history of the Cordillera ;

and the Cordillera itself is absolutely modern as compared with many of the fossiliferous strata of Europe and America.

We crossed the Uspallata range, and at night slept at the custom-house—the only inhabited spot on the plain. Shortly before leaving the mountains, there was a very extraordinary view; red, purple, green, and quite white sedimentary rocks, alternating with black lavas, were broken up and thrown into all kinds of disorder by masses of porphyry of every shade of colour, from dark brown to the brightest lilac. It was the first view I ever saw, which really resembled those pretty sections which geologists make of the inside of the earth.

The next day we crossed the plain, and followed the course of the same great mountain stream which flows by Luxan. Here it was a furious torrent, quite impassable, and appeared larger than in the low country, as was the case with the rivulet of Villa Vicencio. On the evening of the succeeding day, we reached the Rio de las Vacas, which is considered the worst stream in the Cordillera to cross. As all these rivers have a rapid and short course, and are formed by the melting of the snow, the hour of the day makes a considerable difference in their volume. In the evening the stream is muddy and full, but about daybreak it becomes clearer and much less impetuous. This we found to be the case with the Rio Vacas, and in the morning we crossed it with little difficulty.

The scenery thus far was very uninteresting, compared with that of the Portillo pass. Little can be seen beyond the bare walls of the one grand, flat-bottomed valley,

which the road follows up to the highest crest. The valley and the huge rocky mountains are extremely barren : during the two previous nights the poor mules had absolutely nothing to eat, for excepting a few low resinous bushes, scarcely a plant can be seen. In the course of this day we crossed some of the worst passes in the Cordillera, but their danger has been much exaggerated. I was told that if I attempted to pass on foot, my head would turn giddy, and that there was no room to dismount ; but I did not see a place where any one might not have walked over backwards, or got off his mule on either side. One of the bad passes, called *las Animas* (the Souls), I had crossed, and did not find out till a day afterwards, that it was one of the awful dangers. No doubt there are many parts in which, if the mule should stumble, the rider would be hurled down a great precipice ; but of this there is little chance. I dare say, in the spring, the 'laderas,' or roads, which each year are formed anew across the piles of fallen detritus, are very bad ; but from what I saw, I suspect the real danger is nothing. With cargo-mules the case is rather different, for the loads project so far, that the animals, occasionally running against each other, or against a point of rock, lose their balance, and are thrown down the precipices. In crossing the rivers I can well believe that the difficulty may be very great ; at this season there was little trouble, but in the summer they must be very hazardous. I can quite imagine, as Sir F. Head describes, the different expressions of those who *have* passed the gulf, and those who *are* passing. I never heard of any man being drowned, but with loaded mules it frequently happens. The arriero tells you to show your mule

the best line, and allow her to cross as she likes : the cargo-mule takes a bad line, and is often lost.

From the Rio de las Vacas to the Puente del Incas, half a day's journey. As there was pasture for the mules, and geology for me, we bivouacked here for the night. When one hears of a natural Bridge, one pictures to oneself some deep and narrow ravine, across which a bold mass of rock has fallen ; or a great arch hollowed out like the vault of a cavern. Instead of this, the Incas Bridge consists of a crust of stratified shingle, cemented together by the deposits of the neighbouring hot springs. It appears, as if the stream had scooped out a channel on one side, leaving an overhanging ledge, which was met by earth and stones falling down from the opposite cliff. Certainly an oblique junction, as would happen in such a case, was very distinct on one side. The Bridge of the Incas is by no means worthy of the great monarchs whose name it bears.

We had a long day's ride across the central ridge, from the Incas Bridge to the Ojos del Agua, which are situated near the lowest *casucha* on the Chilian side. These casuchas are round little towers, with steps outside to reach the floor, which is raised some feet above the ground on account of the snow-drifts. They are eight in number, and under the Spanish government were kept during the winter well stored with food and charcoal, and each courier had a master-key. Now they only answer the purpose of caves, or rather dungeons. Seated on some little eminence, they are not, however, ill suited to the surrounding scene of desolation. The zigzag ascent of the Cumbre, or the partition of the waters, was very steep and tedious ; its height, according to Mr. Pentland, is 12,454 feet.

The road did not pass over any perpetual snow, although there were patches of it on both hands. The wind on the summit was exceedingly cold, but it was impossible not to stop for a few minutes to admire, again and again, the colour of the heavens, and the brilliant transparency of the atmosphere. The scenery was grand : to the westward there was a fine chaos of mountains, divided by profound ravines. Some snow generally falls before this period of the season, and it has even happened that the Cordillera have been finally closed by this time. But we were most fortunate. The sky, by night and by day, was cloudless, excepting a few round little masses of vapour, that floated over the highest pinnacles. I have often seen these islets in the sky, marking the position of the Cordillera, when the far-distant mountains have been hidden beneath the horizon.

In the morning we found some thief had stolen one of our mules, and the bell of the *madrina*. We therefore rode only two or three miles down the valley, and stayed there the ensuing day in hopes of recovering the mule, which the *arriero* thought had been hidden in some ravine. The scenery in this part had assumed a Chilian character : the lower sides of the mountains, dotted over with the pale evergreen *Quillay* tree and with the great chandelier-like cactus, are certainly more to be admired than the bare eastern valleys ; but I cannot quite agree with the admiration expressed by some travellers. The extreme pleasure, I suspect, is chiefly owing to the prospect of a good fire and of a good supper, after escaping from the cold regions above ; and I am sure I most heartily participated in these feelings.

We left the valley of the Aconcagua, by which we had descended, and reached in the evening a cottage near the Villa de St. Rosa. The fertility of the plain was delightful : the autumn being advanced, the leaves of many of the fruit-trees were falling ; and of the labourers—some were busy in drying figs and peaches on the roofs of their cottages, while others were gathering the grapes from the vineyards. It was a pretty scene ; but I missed that pensive stillness which makes the autumn in England indeed the evening of the year. On the 10th we reached Santiago, where I received a very kind and hospitable reception from Mr. Caldcleugh. My excursion only cost me twenty-four days, and never did I more deeply enjoy an equal space of time. A few days afterwards I returned to Mr. Corfield's house at Valparaiso.

4. THE GALAPAGOS ISLANDS

The natural history of these islands is eminently curious, and well deserves attention. Most of the organic productions are aboriginal creations, found nowhere else ; there is even a difference between the inhabitants of the different islands ; yet all show a marked relationship with those of America, though separated from that continent by an open space of ocean, between 500 and 600 miles in width. The archipelago is a little world within itself, or rather a satellite attached to America, whence it has derived a few stray colonists, and has received the general character of its indigenous productions. Considering the small size of these islands, we feel the more astonished at the number of their aboriginal beings, and

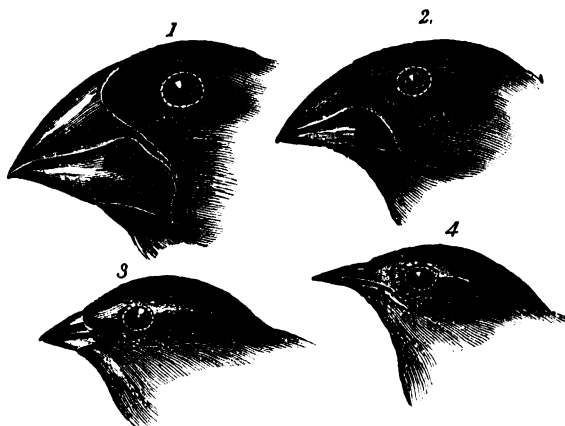
at their confined range. Seeing every height crowned with its crater, and the boundaries of most of the lava-streams still distinct, we are led to believe that within a period, geologically recent, the unbroken ocean was here spread out. Hence, both in space and time, we seem to be brought somewhat near to that great fact—that mystery of mysteries—the first appearance of new beings on this earth.

Of terrestrial mammals, there is only one which must be considered as indigenous, namely, a mouse (*Mus Galapagoensis*), and this is confined, as far as I could ascertain, to Chatham Island, the most easterly island of the group. It belongs, as I am informed by Mr. Waterhouse, to a division of the family of mice characteristic of America. At James Island, there is a rat sufficiently distinct from the common kind to have been named and described by Mr. Waterhouse; but as it belongs to the old-world division of the family, and as this island has been frequented by ships for the last hundred and fifty years, I can hardly doubt that this rat is merely a variety, produced by the new and peculiar climate, food, and soil, to which it has been subjected. Although no one has a right to speculate without distinct facts, yet even with respect to the Chatham Island mouse, it should be borne in mind, that it may possibly be an American species imported here; for I have seen, in a most unfrequented part of the Pampas, a native mouse living in the roof of a newly-built hovel, and therefore its transportation in a vessel is not improbable: analogous facts have been observed by Dr. Richardson in North America.

The land birds consist, firstly, of a hawk, curiously intermediate in structure between a Buzzard and the

American group of carrion-feeding Polybori ; and with these latter birds it agrees most closely in every habit and even tone of voice. Secondly, there are two owls, representing the short-eared and white barn-owls of Europe. Thirdly, a wren, three tyrant fly-catchers (two of them species of *Pyrocephalus*, one or both of which would be ranked by some ornithologists as only varieties), and a dove—all analogous to, but distinct from, American species. Fourthly, a swallow, which though differing from the *Progne purpurea* of both Americas, only in being rather duller coloured, smaller, and slenderer, is considered by Mr. Gould as specifically distinct. Fifthly, there are three species of mocking-thrush—a form highly characteristic of America. The land-birds form a most singular group of finches, related to each other in the structure of their beaks, short tails, form of body, and plumage : there are thirteen species, which Mr. Gould has divided into four sub-groups. All these species are peculiar to this archipelago ; and so is the whole group, with the exception of one species of the sub-group *Cactornis*, lately brought from Bow island, in the Low Archipelago. Of *Cactornis*, the two species may be often seen climbing about the flowers of the great cactus-trees ; but all the other species of this group of finches, mingled together in flocks, feed on the dry and sterile ground of the lower districts. The males of all, or certainly of the greater number, are jet black ; and the females (with perhaps one or two exceptions) are brown. The most curious fact is the perfect gradation in the size of the beaks in the different species of *Geospiza*, from one as large as that of a hawfinch to that of a chaffinch, and (if Mr. Gould is right in including his sub-group, *Certhidea*,

in the main group) even to that of a warbler. The largest beak in the genus *Geospiza* is shown in Fig. 1, and the smallest in Fig. 3; but instead of there being only one intermediate species, with a beak of the size shown in Fig. 2, there are no less than six species with insensibly graduated beaks. The beak of the sub-group *Certhidea*, is shown in Fig. 4. The beak of *Cactornis* is somewhat like that of a starling; and that of the

1. *Geospiza magnirostris*.2. *Geospiza fortis*.3. *Geospiza parvula*.4. *Certhidea olivacea*.

fourth sub-group, *Camarhynchus*, is slightly parrot-shaped. Seeing this gradation and diversity of structure in one small, intimately related group of birds, one might really fancy that from an original paucity of birds in this archipelago, one species had been taken and modified for different ends. In a like manner it might be fancied that a bird originally a buzzard, had been induced here to undertake the office of the carrion-feeding *Polybori* of the American continent.

Of waders and water-birds I was able to get only eleven kinds, and of these only three (including a rail confined to the damp summits of the islands) are new species. Considering the wandering habits of the gulls, I was surprised to find that the species inhabiting these islands is peculiar, but allied to one from the southern parts of South America. The far greater peculiarity of the land-birds, namely, twenty-five out of twenty-six being new species or at least new races, compared with the waders and web-footed birds, is in accordance with the greater range which these latter orders have in all parts of the world. We shall hereafter see this law of aquatic forms, whether marine or fresh-water, being less peculiar at any given point of the earth's surface than the terrestrial forms of the same classes, strikingly illustrated in the shells, and in a lesser degree in the insects of this archipelago.

Two of the waders are rather smaller than the same species brought from other places: the swallow is also smaller, though it is doubtful whether or not it is distinct from its analogue. The two owls, the two tyrant fly-catchers (*Pyrocephalus*) and the dove, are also smaller than the analogous but distinct species, to which they are most nearly related; on the other hand, the gull is rather larger. The two owls, the swallow, all three species of mocking-thrush, the dove in its separate colours though not in its whole plumage, the Totanus, and the gull, are likewise duskier coloured than their analogous species; and in the case of the mocking-thrush and Totanus, than any other species of the two genera. With the exception of a wren with a fine yellow breast, and of a tyrant fly-catcher with a scarlet tuft and breast, none of the birds are brilliantly

coloured, as might have been expected in an equatorial district. Hence it would appear probable, that the same causes which here make the immigrants of some species smaller, make most of the peculiar Galapageian species also smaller, as well as very generally more dusky coloured. All the plants have a wretched, weedy appearance, and I did not see one beautiful flower. The insects, again, are small sized and dull coloured, and, as Mr. Waterhouse informs me, there is nothing in their general appearance which would have led him to imagine that they had come from under the equator. The birds, plants, and insects have a desert character, and are not more brilliantly coloured than those from southern Patagonia ; we may, therefore, conclude that the usual gaudy colouring of the intertropical productions, is not related either to the heat or light of those zones, but to some other cause, perhaps to the conditions of existence being generally favourable to life.

We will now turn to the order of reptiles, which gives the most striking character to the zoology of these islands. The species are not numerous, but the numbers of individuals of each species are extraordinarily great. There is one small lizard belonging to a South American genus, and two species (and probably more) of the *Amblyrhynchus*—a genus confined to the Galapagos islands. There is one snake which is numerous ; it is identical, as I am informed by M. Bibron, with the *Psammophis Temminckii* from Chile. Of sea-turtle I believe there is more than one species ; and of tortoises there are, as we shall presently show, two or three species or races. Of toads and frogs there are none : I was sur-

prised at this, considering how well suited for them the temperate and damp upper woods appeared to be. It recalled to my mind the remark made by Bory St. Vincent, namely, that none of this family are found on any of the volcanic islands in the great oceans. As far as I can ascertain from various works, this seems to hold good throughout the Pacific, and even in the large islands of the Sandwich archipelago. Mauritius offers an apparent exception, where I saw the *Rana Mascariensis* in abundance: this frog is said now to inhabit the Seychelles, Madagascar, and Bourbon; but on the other hand, Du Bois, in his voyage of 1669, states that there were no reptiles in Bourbon except tortoises; and the Officier du Roi asserts that before 1768 it had been attempted, without success, to introduce frogs into Mauritius—I presume, for the purpose of eating: hence it may be well doubted whether this frog is an aboriginal of these islands. The absence of the frog family in the oceanic islands is the more remarkable, when contrasted with the case of lizards, which swarm on most of the smallest islands. May this difference not be caused by the greater facility with which the eggs of lizards, protected by calcareous shells, might be transported through salt-water, than could the slimy spawn of frogs?

I will first describe the habits of the tortoise (*Testudo nigra*, formerly called *Indica*), which has been so frequently alluded to. These animals are found, I believe, on all the islands of the Archipelago; certainly on the greater number. They frequent in preference the high damp parts, but they likewise live in the lower and arid districts. I have already shown, from the numbers which have been caught in a single day, how very

numerous they must be. Some grow to an immense size : Mr. Lawson, an Englishman, and vice-governor of the colony, told us that he had seen several so large, that it required six or eight men to lift them from the ground ; and that some had afforded as much as two hundred pounds of meat. The old males are the largest, the females rarely growing to so great a size : the male can readily be distinguished from the female by the greater length of its tail. The tortoises which live on those islands where there is no water, or in the lower and arid parts of the others, feed chiefly on the succulent cactus. Those which frequent the higher and damp regions, eat the leaves of various trees, a kind of berry (called guayavita) which is acid and austere, and likewise a pale green filamentous lichen (*Usnera plicata*), that hangs in tresses from the boughs of the trees.

The tortoise is very fond of water, drinking large quantities, and wallowing in the mud. The larger islands alone possess springs, and these are always situated towards the central parts, and at a considerable height. The tortoises, therefore, which frequent the lower districts, when thirsty, are obliged to travel from a long distance. Hence broad and well-beaten paths branch off in every direction from the wells down to the sea-coast ; and the Spaniards by following them up, first discovered the watering-places. When I landed at Chatham Island, I could not imagine what animal travelled so methodically along well-chosen tracks. Near the springs it was a curious spectacle to behold many of these huge creatures, one set eagerly travelling onwards with outstretched necks, and another set returning, after having drunk their fill. When the tortoise arrives at the spring, quite regardless

of any spectator, he buries his head in the water above his eyes, and greedily swallows great mouthfuls, at the rate of about ten in a minute. The inhabitants say each animal stays three or four days in the neighbourhood of the water, and then returns to the lower country ; but they differed respecting the frequency of these visits. The animal probably regulates them according to the nature of the food on which it has lived. It is, however, certain that tortoises can subsist even on those islands, where there is no other water than what falls during a few rainy days in the year.

I believe it is well ascertained, that the bladder of the frog acts as a reservoir for the moisture necessary to its existence : such seems to be the case with the tortoise. For some time after a visit to the springs, their urinary bladders are distended with fluid, which is said gradually to decrease in volume, and to become less pure. The inhabitants, when walking in the lower district, and overcome with thirst, often take advantage of this circumstance, and drink the contents of the bladder if full : in one I saw killed, the fluid was quite limpid, and had only a very slightly bitter taste. The inhabitants, however, always first drink the water in the pericardium, which is described as being best.

The tortoises, when purposely moving towards any point, travel by night and day, and arrive at their journey's end much sooner than would be expected. The inhabitants, from observing marked individuals, consider that they travel a distance of about eight miles in two or three days. One large tortoise, which I watched, walked at the rate of sixty yards in ten minutes, that is 360 yards in the hour, or four miles a day—allowing a little time for it to eat on the road.

During the breeding season, when the male and female are together, the male utters a hoarse roar or bellowing, which, it is said, can be heard at the distance of more than a hundred yards. The female never uses her voice, and the male only at these times ; so that when the people hear this noise, they know that the two are together. They were at this time (October) laying their eggs. The female, where the soil is sandy, deposits them together, and covers them up with sand ; but where the ground is rocky she drops them indiscriminately in any hole : Mr. Bynoe found seven placed in a fissure. The egg is white and spherical ; one which I measured was seven inches and three-eighths in circumference, and therefore larger than a hen's egg. The young tortoises, as soon as they are hatched, fall a prey in great numbers to the carrion-feeding buzzard. The old ones seem generally to die from accidents, as from falling down precipices : at least, several of the inhabitants told me, that they had never found one dead without some evident cause.

The inhabitants believe that these animals are absolutely deaf ; certainly they do not overhear a person walking close behind them. I was always amused when overtaking one of these great monsters, as it was quietly pacing along, to see how suddenly, the instant I passed, it would draw in its head and legs, and uttering a deep hiss fall to the ground with a heavy sound, as if struck dead. I frequently got on their backs, and then giving a few raps on the hinder part of their shells, they would rise up and walk away :—but I found it very difficult to keep my balance. The flesh of this animal is largely employed, both fresh and salted ; and a beautifully clear oil is prepared from the fat

When a tortoise is caught, the man makes a slit in the skin near its tail, so as to see inside its body, whether the fat under the dorsal plate is thick. If it is not, the animal is liberated ; and it is said to recover soon from this strange operation. In order to secure the tortoises, it is not sufficient to turn them like turtle, for they are often able to get on their legs again.

There can be little doubt that this tortoise is an aboriginal inhabitant of the Galapagos ; for it is found on all, or nearly all, the islands, even on some of the smaller ones where there is no water ; had it been an imported species, this would hardly have been the case in a group which has been so little frequented. Moreover, the old Bucaniers found this tortoise in greater numbers even than at present : Wood and Rogers also, in 1708, say that it is the opinion of the Spaniards, that it is found nowhere else in this quarter of the world. It is now widely distributed ; but it may be questioned whether it is in any other place an aboriginal. The bones of a tortoise at Mauritius, associated with those of the extinct Dodo, have generally been considered as belonging to this tortoise : if this had been so, undoubtedly it must have been there indigenous ; but M. Bibron informs me that he believes that it was distinct, as the species now living there certainly is.

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The peculiarity of the Galapageian Flora is best shown in certain families ;—thus there are 21 species of Compositæ, of which 20 are peculiar to this archipelago ; these belong to twelve genera, and of these genera no less than ten are confined to the archipelago ! Dr. Hooker informs me that the Flora has an undoubted

Western American character ; nor can he detect in it any affinity with that of the Pacific. If, therefore, we except the eighteen marine, the one fresh-water, and one land-shell, which have apparently come here as colonists from the central islands of the Pacific, and likewise the one distinct Pacific species of the Galapageian group of finches, we see that this archipelago, though standing in the Pacific Ocean, is zoologically part of America.

If this character were owing to immigrants from America, there would be little remarkable in it ; but we see that a vast majority of all the land animals, and that more than half of the flowering plants, are aboriginal productions. It was most striking to be surrounded by new birds, new reptiles, new shells, new insects, new plants, and yet by innumerable trifling details of structure, and even by the tones of voice and plumage of the birds, to have the temperate plains of Patagonia, or the hot dry deserts of Northern Chile, vividly brought before my eyes. Why, on these small points of land, which within a late geological period must have been covered by the ocean, which are formed of basaltic lava, and therefore differ in geological character from the American continent, and which are placed under a peculiar climate—why were their aboriginal inhabitants, associated, I may add, in different proportions both in kind and number from those on the continent, and therefore acting on each other in a different manner—why were they created on American types of organisation ? It is probable that the islands of the Cape de Verde group resemble, in all their physical conditions, far more closely the Galapagos Islands than these latter physically resemble the coast

of America ; yet the aboriginal inhabitants of the two groups are totally unlike ; those of the Cape de Verde Islands bearing the impress of Africa, as the inhabitants of the Galapagos Archipelago are stamped with that of America.

I have not as yet noticed by far the most remarkable feature in the natural history of this archipelago ; it is, that the different islands to a considerable extent are inhabited by a different set of beings. My attention was first called to this fact by the Vice-Governor, Mr. Lawson, declaring that the tortoises differed from the different islands, and that he could with certainty tell from which island any one was brought. I did not for some time pay sufficient attention to this statement, and I had already partially mingled together the collections from two of the islands. I never dreamed that islands, about fifty or sixty miles apart, and most of them in sight of each other, formed of precisely the same rocks, placed under a quite similar climate, rising to a nearly equal height, would have been differently tenanted ; but we shall soon see that this is the case. It is the fate of most voyagers, no sooner to discover what is most interesting in any locality, than they are hurried from it ; but I ought, perhaps, to be thankful that I obtained sufficient material to establish this most remarkable fact in the distribution of organic beings.

The inhabitants, as I have said, state that they can distinguish the tortoises from the different islands ; and that they differ not only in size, but in other characters. Captain Porter has described those from Charles and from the nearest island to it, namely, Hood Island, as having their shells in front thick and

turned up like a Spanish saddle, whilst the tortoises from James Island are rounder, blacker, and have a better taste when cooked. M. Bibron, moreover, informs me that he has seen what he considers two distinct species of tortoise from the Galapagos, but he does not know from which islands. The specimens that I brought from three islands were young ones ; and probably owing to this cause, neither Mr. Gray nor myself could find in them any specific differences. I have remarked that the marine *Amblyrhynchus* was larger at Albemarle Island than elsewhere ; and M. Bibron informs me that he has seen two distinct aquatic species of this genus ; so that the different islands probably have their representative species or races of the *Amblyrhynchus*, as well as of the tortoise. My attention was first thoroughly aroused, by comparing together the numerous specimens, shot by myself and several other parties on board, of the mocking-thrushes, when, to my astonishment, I discovered that all those from Charles Island belonged to one species (*Mimus trifasciatus*) ; all from Albemarle Island to *M. parvulus* ; and all from James and Chatham Islands (between which two other islands are situated, as connecting links) belonged to *M. melanotis*. These two latter species are closely allied, and would by some ornithologists be considered as only well-marked races or varieties ; but the *Mimus trifasciatus* is very distinct. Unfortunately most of the specimens of the finch tribe were mingled together ; but I have strong reasons to suspect that some of the species of the sub-group *Geospiza* are confined to separate islands. If the different islands have their representatives of *Geospiza*, it may help to explain the singularly large number of the

species of this sub-group in this one small archipelago, and as a probable consequence of their numbers, the perfectly graduated series in the size of their beaks. Two species of the sub-group *Cactornis*, and two of *Camarhynchus*, were procured in the archipelago ; and of the numerous specimens of these two sub-groups shot by four collectors at James Island, all were found to belong to one species of each ; whereas the numerous specimens shot either on Chatham or Charles Island (for the two sets were mingled together) all belonged to the two other species : hence we may feel almost sure that these islands possess their representative species of these two sub-groups. In land-shells this law of distribution does not appear to hold good. In my very small collection of insects, Mr. Waterhouse remarks, that of those which were ticketed with their locality, not one was common to any two of the islands.

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The distribution of the tenants of this archipelago would not be nearly so wonderful, if, for instance, one island had a mocking-thrush, and a second island some other quite distinct genus ;—if one island had its genus of lizard, and a second island another distinct genus, or none whatever ;—or if the different islands were inhabited, not by representative species of the same genera of plants, but by totally different genera, as does to a certain extent hold good ; for, to give one instance, a large berry-bearing tree at James Island has no representative species in Charles Island. But it is the circumstance, that several of the islands possess their own species of the tortoise, mocking-thrush, finches, and numerous plants, these species having the same general habits, occupying analogous situations,

and obviously filling the same place in the natural economy of this archipelago, that strikes me with wonder. It may be suspected that some of these representative species, at least in the case of the tortoise and of some of the birds, may hereafter prove to be only well-marked races ; but this would be of equally great interest to the philosophical naturalist. I have said that most of the islands are in sight of each other : I may specify that Charles Island is fifty miles from the nearest part of Chatham Island, and thirty-three miles from the nearest part of Albemarle Island. Chatham Island is sixty miles from the nearest part of James Island, but there are two intermediate islands between them which were not visited by me. James Island is only ten miles from the nearest part of Albemarle Island, but the two points where the collections were made are thirty-two miles apart. I must repeat, that neither the nature of the soil, nor height of the land, nor the climate, nor the general character of the associated beings, and therefore their action one on another, can differ much in the different islands. If there be any sensible difference in their climates, it must be between the windward group (namely, Charles and Chatham Islands), and that to leeward ; but there seems to be no corresponding difference in the productions of these two halves of the archipelago.

The only light which I can throw on this remarkable difference in the inhabitants of the different islands, is, that very strong currents of the sea running in a westerly and W.N.W. direction must separate, as far as transportal by the sea is concerned, the southern islands from the northern ones ; and between these northern islands a strong N.W. current was observed,

which must effectually separate James and Albemarle Islands. As the archipelago is free to a most remarkable degree from gales of wind, neither the birds, insects, nor lighter seeds, would be blown from island to island. And lastly, the profound depth of the ocean between the islands, and their apparently recent (in a geological sense) volcanic origin, render it highly unlikely that they were ever united ; and this, probably, is a far more important consideration than any other, with respect to the geographical distribution of their inhabitants. Reviewing the facts here given, one is astonished at the amount of creative force, if such an expression may be used, displayed on these small, barren, and rocky islands ; and still more so, at its diverse yet analogous action on points so near each other. I have said that the Galapagos Archipelago might be called a satellite attached to America, but it should rather be called a group of satellites, physically similar, organically distinct, yet intimately related to each other, and all related in a marked, though much lesser degree, to the great American continent.

I will conclude my description of the natural history of these islands, by giving an account of the extreme tameness of the birds.

This disposition is common to all the terrestrial species ; namely, to the mocking-thrushes, the finches, wrens, tyrant-flycatchers, the dove, and carrion-buzzard. All of them often approached sufficiently near to be killed with a switch, and sometimes, as I myself tried, with a cap or hat. A gun is here almost superfluous ; for with the muzzle I pushed a hawk off the branch of a tree. One day, whilst lying down, a mocking-

thrush alighted on the edge of a pitcher, made of the shell of a tortoise, which I held in my hand, and began very quietly to sip the water ; it allowed me to lift it from the ground whilst seated on the vessel : I often tried, and very nearly succeeded, in catching these birds by their legs. Formerly the birds appear to have been even tamer than at present. Cowley (in the year 1684) says that the ' Turtle-doves were so tame, that they would often alight upon our hats and arms, so as that we could take them alive : they not fearing man, until such time as some of our company did fire at them, whereby they were rendered more shy.' Dampier also, in the same year, says that a man in a morning's walk might kill six or seven dozen of these doves. At present, although certainly very tame, they do not alight on people's arms, nor do they suffer themselves to be killed in such large numbers. It is surprising that they have not become wilder ; for these islands during the last hundred and fifty years have been frequently visited by bucaniers and whalers ; and the sailors, wandering through the woods in search of tortoises, always take cruel delight in knocking down the little birds.

These birds, although now still more persecuted, do not readily become wild : in Charles Island, which had then been colonised about six years, I saw a boy sitting by a well with a switch in his hand, with which he killed the doves and finches as they came to drink. He had already procured a little heap of them for his dinner ; and he said that he had constantly been in the habit of waiting by this well for the same purpose. It would appear that the birds of this archipelago, not having as yet learnt that man is a more dangerous

animal than the tortoise or the *Amblyrhynchus*, disregard him, in the same manner as in England shy birds, such as magpies, disregard the cows and horses grazing in our fields.

The Falkland Islands offer a second instance of birds with a similar disposition. The extraordinary tameness of the little *Opetiorhynchus* has been remarked by Pernety, Lesson, and other voyagers. It is not, however, peculiar to that bird: the *Polyborus*, snipe, upland and lowland goose, thrush, bunting, and even some true hawks, are all more or less tame. As the birds are so tame there, where foxes, hawks, and owls occur, we may infer that the absence of all rapacious animals at the Galapagos, is not the cause of their tameness here. The upland geese at the Falklands show, by the precaution they take in building on the islets, that they are aware of their danger from the foxes; but they are not by this rendered wild towards man. This tameness of the birds, especially of the water-fowl, is strongly contrasted with the habits of the same species in *Tierra del Fuego*, where for ages past they have been persecuted by the wild inhabitants. In the Falklands, the sportsman may sometimes kill more of the upland geese in one day than he can carry home; whereas in *Tierra del Fuego*, it is nearly as difficult to kill one, as it is in England to shoot the common wild goose.

In the time of Pernety (1763), all the birds there appear to have been much tamer than at present; he states that the *Opetiorhynchus* would almost perch on his finger; and that with a wand he killed ten in half an hour. At that period the birds must have been about as tame, as they now are at the Galapagos. They appear to have learnt caution more slowly at

these latter islands than at the Falklands, where they have had proportionate means of experience ; for besides frequent visits from vessels, those islands have been at intervals colonised during the entire period. Even formerly, when all the birds were so tame, it was impossible by Pernety's account to kill the black-necked swan—a bird of passage, which probably brought with it the wisdom learnt in foreign countries.

I may add that, according to Du Bois, all the birds at Bourbon in 1571-72, with the exception of the flamingoes and geese, were so extremely tame, that they could be caught by the hand, or killed in any number with a stick. Again, at Tristan d'Acunha in the Atlantic, Carmichael states that the only two land-birds, a thrush and a bunting, were 'so tame as to suffer themselves to be caught with a hand-net.' From these several facts we may, I think, conclude, first, that the wildness of birds with regard to man, is a particular instinct directed against *him*, and not dependent on any general degree of caution arising from other sources of danger ; secondly, that it is not acquired by individual birds in a short time, even when much persecuted ; but that in the course of successive generations it becomes hereditary. With domesticated animals we are accustomed to see new mental habits or instincts acquired and rendered hereditary ; but with animals in a state of nature, it must always be most difficult to discover instances of acquired hereditary knowledge. In regard to the wildness of birds towards man, there is no way of accounting for it, except as an inherited habit : comparatively few young birds, in any one year, have been injured by man in England, yet almost all, even nestlings, are afraid of him ; many

individuals, on the other hand, both at the Galapagos and at the Falklands, have been pursued and injured by man, but yet have not learned a salutary dread of him. We may infer from these facts, what havoc the introduction of any new beast of prey must cause in a country, before the instincts of the indigenous inhabitants have become adapted to the stranger's craft or power.

II

DAVID LIVINGSTONE

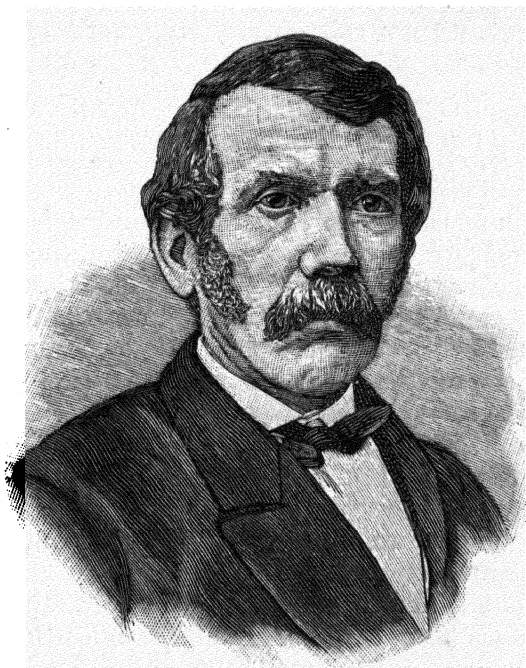
I. ELEPHANT-HUNTING

THE country is becoming very beautiful, and furrowed by deep valleys ; the underlying rocks, being igneous, have yielded fertile soil. There is great abundance of large game. The buffaloes select open spots, and often eminences, as standing places through the day. We crossed the Mbai, and found in its bed, rocks of pink marble. Some little hills near it are capped by marble of beautiful whiteness, the underlying rock being igneous. Violent showers occur frequently on the hills, and cause such sudden sweeping floods in these rivulets, that five of our men, who had gone to the other side for firewood, were obliged to swim back. The temperature of the air is lowered considerably by the daily rains. Several times the thermometer at sunrise has been as low as 68° , and 74° at sunset. Generally, however, it stood from 72° to 74° at sunrise, 90° to 96° at midday, and 80° to 84° at sunset. The sensation, however, as before remarked, was not disagreeable.

We entered a most beautiful valley, abounding in large game. Finding a buffalo lying down, I went to secure him for our food. Three balls did not kill him, and, as he turned round as if for a charge, we ran for the shelter of some rocks. Before we gained them, we

found that three elephants, probably attracted by the strange noise, had cut off our retreat on that side ; they, however, turned short off, and allowed us to gain the rocks. We then saw that the buffalo was moving off quite briskly, and in order not to be entirely balked, I tried a long shot at the last of the elephants, and, to the great joy of my people, broke his foreleg. The young men soon brought him to a stand, and one shot in the brain despatched him. I was right glad to see the joy manifested at such an abundant supply of meat.

On the following day, while my men were cutting up the elephant, great numbers of the villagers came to enjoy the feast. We were on the side of a fine green valley, studded here and there with trees, and cut by numerous rivulets. I had retired from the noise, to take an observation among some rocks of laminated grit, when I beheld an elephant and her calf at the end of the valley, about two miles distant. The calf was rolling in the mud, and the dam was standing fanning herself with her great ears. As I looked at them through my glass, I saw a long string of my own men appearing on the other side of them, and Sekwebu came and told me that these had gone off, saying, ‘ Our father will see to-day what sort of men he has got.’ I then went higher up the sides of the valley, in order to have a distinct view of their mode of hunting. The goodly beast, totally unconscious of the approach of an enemy, stood for some time suckling her young one, which seemed about two years old ; they then went into a pit containing mud, and smeared themselves all over with it, the little one frisking about his dam, flapping his ears and tossing his trunk incessantly in elephantine



DAVID LIVINGSTONE

fashion. She kept flapping her ears and wagging her tail, as if in the height of enjoyment. Then began the piping of her enemies, which was performed by blowing into a tube, or the hands closed together, as boys do into a key. They call out to attract the animals' attention :

' O Chief ! O Chief ! we have come to kill you.

O Chief ! O Chief ! many more will die beside you,
The gods have said it,' &c., &c.

Both animals expanded their ears and listened, then left their bath as the crowd rushed towards them. The little one ran forward towards the end of the valley, but, seeing the men there, returned to his dam. She placed herself on the danger side of her calf, and passed her proboscis over it again and again, as if to assure it of safety. She frequently looked back to the men, who kept up an incessant shouting, singing, and piping, then looked at her young one and ran after it, sometimes sideways, as if her feelings were divided between anxiety to protect her offspring, and desire to revenge the temerity of her persecutors. The men kept about a hundred yards in her rear, and some that distance from her flanks, and continued thus until she was obliged to cross a rivulet. The time spent in descending and getting up the opposite bank, allowed of their coming up to the edge, and discharging their spears at about 20 yards distant. After the first discharge, she appeared with her sides red with blood, and beginning to flee for her own life, seemed to think no more of her young. I had previously sent off Sekwebu with orders to spare the calf. It ran very fast, but neither young nor old ever entered into a gallop ;

their quickest pace is only a sharp walk. Before Sekwebu could reach them, the calf had taken refuge in the water, and was killed. The pace of the dam gradually became slower. She turned with a shriek of rage, and made a furious charge back among the men. They vanished at right angles to her course or sideways, and, as she ran straight on, she went through the whole party, but came near no one, except a man who wore a piece of cloth on his shoulders. Bright clothing is always dangerous in these cases. She charged three or four times, and, except in the first instance, never went farther than a hundred yards. She often stood after she crossed a rivulet, and faced the men, though she received fresh spears. It was by this process of spearing and loss of blood that she was killed, for at last, making a short charge, she staggered round and sunk down dead in a kneeling posture. I did not see the whole hunt, having been tempted away by both sun and moon appearing unclouded. I turned from the spectacle of the destruction of noble animals, which might be made so useful in Africa, with a feeling of sickness, and it was not relieved by the recollection that the ivory was mine, though that was the case. I regretted to see them killed, and more especially the young one, the meat not being at all necessary at that time ; but it is right to add, that I did not feel sick when my own blood was up the day before. We ought perhaps to judge those deeds more leniently in which we ourselves have no temptation to engage. Had I not been previously guilty of doing the very same thing, I might have prided myself on superior humanity, when I experienced the nausea in viewing my men kill these two.

2. THROUGH AN AFRICAN FOREST

We started with Chitikola as our guide on the 22nd of October and he held us away westwards across the Lilongwe River, then turned north till we came to a village called Mashumba, the headman of which was the only chief who begged anything except medicine, and he got less than we were in the habit of giving in consequence; we give a cloth usually, and clothing being very scarce, this is considered munificent.

We had the Zalanyama range on our left, and our course was generally north, but we had to go in the direction of the villages which were on friendly terms with our guides, and sometimes we went but a little way, as they studied to make the days as short as possible. The headman of the last village, Chitoku, was with us, and he took us to a village of smiths, four furnaces and one smithy being at work. We crossed the Chiniambo, a strong river coming from Zalanyama, and flowing into the Mirongwe, which again goes into the Lintipe. The country near the hills becomes covered with forest; the trees are chiefly Masuko Mochenga (the gum-copal tree), the bark-cloth tree, and rhododendrons. The heath known at the Cape as *Rhinoster Bosch* occurs frequently, and occasionally we have thorny acacias. The grass is short, but there is plenty of it.

Our guide, Mpanda, led us through the forest by what he meant to be a short cut to Chimuna's. We came on a herd of about fifteen elephants, and many trees laid down by these animals. They seem to relish the roots of some kinds, and spend a good deal of time digging

them up ; they chew woody roots and branches as thick as the handle of a spade. Many buffaloes fed here, and we viewed a herd of elands ; they kept out of bow-shot only ; a herd of the baama or hartebeest stood at 200 paces, and one was shot.

While all were rejoicing over the meat, we got news, from the inhabitants of a large village in full flight, that the Mazitu were out on a foray. While roasting and eating meat, I went forward with Mpanda to get men from Chimuna to carry the rest, but was soon recalled. Another crowd were also in full retreat ; the people were running straight to the Zalanyama range, regardless of their feet, making a path for themselves through the forest : they had escaped from the Mazitu that morning : ‘ They saw them ! ’ Mpanda’s people wished to leave and go after their own village, but we persuaded them, on pain of a *milando*, to take us to the nearest village, that was at the bottom of Zalanyama proper, and we took the spoor of the fugitives. The hard grass with stalks nearly as thick as quill must have hurt their feet sorely, but what of that in comparison with dear life ! We meant to take our stand on the hill and defend our property in case of the Mazitu coming near, and we should, in the event of being successful, be a defence to the fugitives who crowded its rocky sides, but next morning we heard that the enemy had gone to the south. Had we gone forward, as we intended, to search for men to carry the meat, we should have met the marauders, for the men of the second party of villagers had remained behind guarding their village till the Mazitu arrived, and they told us what a near escape I had had from walking into their power.

We came along northwards to Chimuna's town a large one of Chipeta, with many villages around. Our path led us through the forest, and as we emerged into the open strath in which the villages lie, we saw the large anthills, each the size of the end of a one-storied cottage, covered with men on guard watching for the Mazitu.

A long line of villagers was just arriving from the south and we could see at some low hills in that direction the smoke arising from the burning settlements. None but men were present, the women and chief were at the mountain called Pambe ; all were fully armed with their long bows, some flat in the bow, others round, and it was common to have the quiver on the back, and a bunch of feathers stuck in the hair like those in our lancers' shakos. But they remained not to fight, but to watch their homes and stores of grain from robbers among their own people in case no Mazitu came ! They gave us a good hut, but sent off at once to let the chief at Pambe know of our arrival. We heard the cocks crying up there in the mountain as we passed in the morning. Chimuna came in the evening, and begged me to remain a day in his village, Pamaloo, as he was the greatest chief Chipeta had. I told him all wished the same thing, and if I listened to each chief, we should never get on, and the rains were near,—but we had to stay over with him.

All the people came down that day from Pambe, and crowded to see the strangers. They know very little beyond their own affairs, though these require a good deal of knowledge and we should be sorely put about if, without their skill, we had to maintain an existence here. Their furnaces are rather bottle-

shaped, and about seven feet high by three broad. One toothless patriarch had heard of books and umbrellas but had never seen either. The oldest inhabitant had never travelled far from the spot in which he was born, yet he had a good knowledge of soils and agriculture, hut-building, basket-making, pottery and the manufacture of bark-cloth and skins for clothing, as also making of nets, traps, and cordage.

Chimuna had a most ungainly countenance, yet did well enough ; he was very thankful for a blister on his loins to ease rheumatic pains, and presented a huge basket of porridge before starting, with a fowl, and asked me to fire a gun that the Mazitu might hear and know that armed men were here. They all say that these marauders flee from firearms, so I think that they are not Zulus at all, though adopting some of their ways.

In going on to Mapuio's we passed several villages, each surrounded by the usual euphorbia hedge, and having large trees for shade. We are on a level, or rather gently undulating country, rather bare of trees. At the junctions of these earthen waves we have always an oozing bog, this often occurs in the slope down the trough of this terrestrial sea ; bushes are common, and of the kind which were cut down as trees. Yellow hematite is very abundant, but the other rocks scarcely appear in the distance ; we have mountains both on the east and west.

On arriving at Mapuio's village, he was, as often happens, invisible, but he sent us a calabash of fresh-made beer, which is very refreshing, gave us a hut, and promised to cook for us in the evening. We have to employ five or six carriers and they rule the length

of the day's march. Those from Chimuna's village growled at the cubit of calico with which we paid them, but a few beads pleased them perfectly, and we parted good friends. It is not likely I should ever see them again, but I always like to please them, because it is right to consider their desires. Is that not what is meant in, 'Blessed is he that considereth the poor'? There is a great deal of good in these poor peoples. In cases of *milando* they rely on the most distant relations and connections to plead their cause, and seldom are they disappointed, though time at certain seasons, as for instance at present, is felt by all to be precious. Every man appears with hoe or axe on shoulder, and the people often only sit down as we pass, and gaze at us till we are out of sight.

Many of the men have large slits in the lobe of the ears, and they have their distinctive tribal tattoo. The women indulge in this painful luxury more than the men, probably because they have very few ornaments. The two central front teeth are hollowed at the cutting edge. Many have quite the Grecian facial angle. Mapuio has thin legs and quite a European face. Delicate features and limbs are common, and the spur-heel is as scarce as among Europeans; small feet and hands are the rule.

Clapping the hands in various ways is the polite way of saying, 'Allow me,' 'I beg pardon,' 'Permit me to pass,' 'Thanks'; it is resorted to in respectful introduction and leave-taking, and also is equivalent to 'Hear, hear!' When inferiors are called they respond by two brisk claps of the hands, meaning, 'I am coming.' They are very punctilious amongst each other. A large ivory bracelet marks the headman of

a village ; there is nothing else to show differences of rank.

We spent Sunday at Mapuio's, and had a long talk with him ; his country is in a poor state from the continual incursions of the Mazitu, who are wholly unchecked.

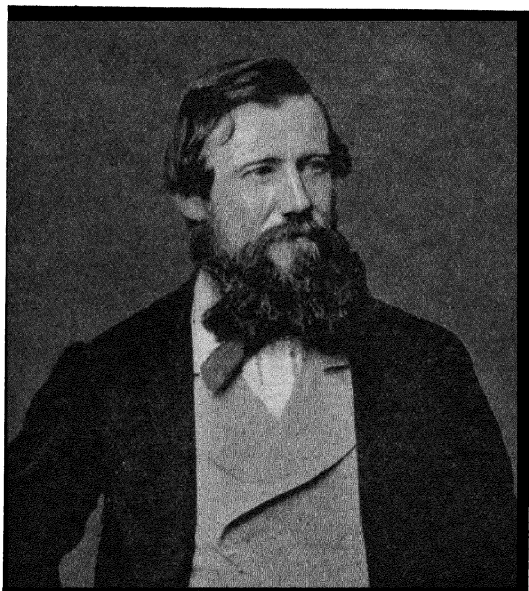
We marched westwards to Makosa's village, and could not go farther, as the next stage is long and through ill-peopled country. The morning was lovely, the whole country bathed in bright sunlight, and not a breath of air disturbed the smoke as it slowly curled from the heaps of burning weeds, which the native agriculturist wisely destroys. The people generally were busy hoeing in the cool of the day. One old man in a village where we rested had trained the little hair he had left into a tail, which, well plastered with fat, he had bent on itself and laid flat on his crown ; another was carefully paring a stick for stirring the porridge, and others were enjoying the cool shade of the wild fig-trees which were always planted at villages. It is a sacred tree all over Africa and India, and the tender roots which drop down towards the ground are used as medicine—a universal remedy. Can it be a tradition of its being like the tree of life, which Archbishop Whately conjectures may have been used in Paradise to render man immortal ? One kind of fig-tree is often seen hacked all over to get the sap, which is used as birdlime ; bark-cloth is made of it too. I like to see the men weaving and spinning, or reclining under these glorious canopies, as much as I love to see our more civilised people lolling on their sofas or ottomans.

III

JOHN HANNING SPEKE

THE DISCOVERY OF THE SOURCE OF THE NILE

I MARCHED up the left bank of the Nile at a considerable distance from the water, to the Isamba Rapids, passing through rich jungle and plantain-gardens. Nango, an old friend, and district officer of the place, first refreshed us with a dish of plantain-squash and dried fish, with pombé. He told us he is often threatened by elephants, but he sedulously keeps them off with charms ; for if they ever tasted a plantain they would never leave the garden until they had cleared it out. He then took us to see the nearest falls of the Nile—extremely beautiful, but very confined. The water ran deep between its banks, which were covered with fine grass, soft cloudy acacias, and festoons of lilac convolvuli ; whilst here and there, where the land had slipped above the rapids, bared places of red earth could be seen, like that of Devonshire ; there, too, the waters, impeded by a natural dam, looked like a huge mill-pond, sullen and dark, in which two crocodiles, laving about, were looking out for prey. From the high banks we looked down upon a line of sloping wooded islets lying across the stream, which divide its waters, and, by interrupting them, cause at once both dam and rapids. The whole was more fairy-like, wild, and romantic than—I must



CAPTAIN J. H. SPEKE

From a portrait in the possession of the Royal
Geographical Society.

confess that my thoughts took that shape—anything I ever saw outside of a theatre. It was exactly the sort of place, in fact, where, bridged across from one side-slip to the other, on a moonlight night, brigands would assemble to enact some dreadful tragedy. Even the Wangũana seemed spellbound at the novel beauty of the sight, and no one thought of moving till hunger warned us night was setting in, and we had better look out for lodgings.

Start again, and after drinking pombé with Nango, when we heard that three Wakungũ had been seized at Kari, in consequence of the murder, the march was commenced, but soon after stopped by the mischievous machinations of our guide, who pretended it was too late in the day to cross the jungles on ahead, either by the road to the source or the palace, and therefore would not move till the morning ; then, leaving us, on the pretext of business, he vanished, and was never seen again. A small black fly, with thick shoulders and bullet-head, infests the place, and torments the naked arms and legs of the people with its sharp stings to an extent that must render life miserable to them.

After a long struggling march, plodding through huge grasses and jungle, we reached a district which I cannot otherwise describe than by calling it a ‘ Church Estate.’ It is dedicated in some mysterious manner to Lũbari (Almighty), and although the king appeared to have authority over some of the inhabitants of it, yet others had apparently a sacred character, exempting them from the civil power, and he had no right to dispose of the land itself. In this territory there are small villages only at every fifth mile, for there is no road, and the lands run high again, whilst, from want of a

guide, we often lost the track. It now transpired that Budja, when he told at the palace that there was no road down the banks of the Nile, did so in consequence of his fear that if he sent my whole party here they would rob these church lands, and so bring him into a scrape with the wizards or ecclesiastical authorities. Had my party not been under control, we could not have put up here; but on my being answerable that no thefts should take place, the people kindly consented to provide us with board and lodgings, and we found them very obliging. One elderly man, half-witted—they said the king had driven his senses from him by seizing his house and family—came at once on hearing of our arrival, laughing and singing in a loose jaunty maniacal manner, carrying odd sticks, shells, and a bundle of mbügü rags, which he deposited before me, dancing and singing again, then retreating and bringing some more, with a few plantains from a garden, when I was to eat, as kings lived upon flesh, and ‘poor Tom’ wanted some, for he lived with lions and elephants in a hovel beyond the gardens, and his belly was empty. He was precisely a black specimen of the English parish idiot.

At last, with a good push for it, crossing hills and threading huge grasses, as well as extensive village plantations lately devastated by elephants—they had eaten all that was eatable, and what would not serve for food they had destroyed with their trunks, not one plantain or one hut being left entire—we arrived at the extreme end of the journey, the farthest point ever visited by the expedition on the same parallel of latitude as King Mtésa’s palace, and just forty miles east of it.

We were well rewarded ; for the 'stones,' as the Waganda call the falls, was by far the most interesting sight I had seen in Africa. Everybody ran to see them at once, though the march had been long and fatiguing, and even my sketch-block was called into play. Though beautiful, the scene was not exactly what I expected ; for the broad surface of the lake was shut out from view by a spur of hill, and the falls, about 12 feet deep, and 400 to 500 feet broad, were broken by rocks. Still it was a sight that attracted one to it for hours—the roar of the waters, the thousands of passenger-fish, leaping at the falls with all their might ; the Wasoga and Waganda fishermen coming out in boats and taking post on all the rocks with rod and hook, hippopotami and crocodiles lying sleepily on the water, the ferry at work above the falls, and cattle driven down to drink at the margin of the lake,—made, in all, with the pretty nature of the country—small hills, grassy-topped, with trees in the folds, and gardens on the lower slopes—as interesting a picture as one could wish to see.

The expedition had now performed its functions. I saw that old father Nile without any doubt rises in the Victoria N'yanza, and, as I had foretold, that lake is the great source of the holy river which cradled the first expounder of our religious belief. I mourned, however, when I thought how much I had lost by the delays in the journey having deprived me of the pleasure of going to look at the north-east corner of the N'yanza to see what connection there was, by the strait so often spoken of, with it and the other lake where the Waganda went to get their salt, and from which another river flowed to the north, making 'Usoga an island.' But I felt I ought to be content with what I had been spared

to accomplish ; for I had seen full half of the lake, and had information given me of the other half, by means of which I knew all about the lake, as far, at least, as the chief objects of geographical importance were concerned.

Let us now sum up the whole and see what it is worth. Comparative information assured me that there was as much water on the eastern side of the lake as there is on the western—if anything, rather more. The most remote waters, *or top head of the Nile*, is the southern end of the lake, situated close on the third degree of south latitude, which gives to the Nile the surprising length, in direct measurement, rolling over thirty-four degrees of latitude, of above 2300 miles, or more than one-eleventh of the circumference of our globe. Now from this southern point, round by the west, to where the *great Nile* stream issues, there is only one feeder of any importance, and that is the Kitangülé river ; whilst from the southernmost point, round by the east, to the strait, there are no rivers at all of any importance ; for the travelled Arabs one and all aver, that from the west of the snow-clad Kilimandjaro to the lake where it is cut by the second degree, and also the first degree of south latitude, there are salt lakes and salt plains, and the country is hilly, not unlike Unyamüezi ; but they said there were no great rivers, and the country was so scantily watered, having only occasional runnels and rivulets, that they always had to make long marches in order to find water when they went on their trading journeys : and further, those Arabs who crossed the strait when they reached Usoga, as mentioned before, during the late interregnum, crossed no river either.

There remains to be disposed of the ' salt lake,' which I believe is not a salt, but a fresh-water lake ; and my reasons are, as before stated, that the natives call all lakes salt, if they find salt beds or salt islands in such places. Dr. Krapf, when he obtained a sight of the Kenia mountain, heard from the natives there that there was a salt lake to its northward, and he also heard that a river ran from Kenia towards the Nile. If his information was true on this latter point, then, without doubt, there must exist some connection between his river and the salt lake I have heard of, and this in all probability would also establish a connection between my salt lake and his salt lake which he heard was called Baringo. In no view that can be taken of it, however, does this unsettled matter touch the established fact that the head of the Nile is in 3° south latitude, where, in the year 1858, I discovered the head of the Victoria N'yanza to be.

I now christened the ' stones ' Ripon Falls, after the nobleman who presided over the Royal Geographical Society when my expedition was got up ; and the arm of water from which the Nile issued, Napoleon Channel, in token of respect to the French Geographical Society, for the honour they had done me, just before leaving England, in presenting me with their gold medal for the discovery of the Victoria N'yanza. One thing seemed at first perplexing—the volume of water in the Kitangülé looked as large as that of the Nile ; but then the one was a slow river and the other swift, and on this account I could form no adequate judgment of their relative values.

Not satisfied with my first sketch of the falls, I could not resist sketching them again ; and then, as the

cloudy state of the weather prevented my observing for latitude, and the officer of the place said a magnificent view of the lake could be obtained from the hill alluded to as intercepting the view from the falls, we proposed going there ; but Kasoro, who had been indulged with nsunnũ antelope skins, and with guinea-fowl for dinner, resisted this, on the plea that I never should be satisfied. There were orders given only to see the ' stones,' and if he took me to one hill I should wish to see another and another, and so on. It made me laugh, for that had been my nature all my life ; but, vexed at heart, and wishing to trick the young tyrant, I asked for boats to shoot hippopotami, in the hope of reaching the hills to picnic ; but boating had never been ordered, and he would not listen to it. ' Then bring fish,' I said, that I might draw them : no, that was not ordered. ' Then go you to the palace, and leave me to go to Urondogani to-morrow, after I have taken a latitude ;' but the wilful creature would not go until he saw me under way. And as nobody would do anything for me without Kasoro's orders, I amused the people by firing at the ferry-boat upon the Usoga side, which they defied me to hit, the distance being 500 yards ; but nevertheless a bullet went through her, and was afterwards brought by the Wasoga nicely folded up in a piece of mbũgũ. Bombay then shot a sleeping crocodile with his carbine, whilst I spent the day out watching the falls.

This day also I spent watching the fish flying at the falls, and felt as if I only wanted a wife and family, garden and yacht, rifle and rod, to make me happy here for life, so charming was the place. What a

place, I thought to myself, this would be for missionaries ! They never could fear starvation, the land is so rich ; and, if farming were introduced by them, they might have hundreds of pupils. I need say no more.

In addition to the rod-and-line fishing, a number of men, armed with long heavy poles with two iron spikes, tied prong-fashion to one end, rushed to a place over a break in the falls, which tired fish seemed to use as a baiting-room, dashed in their forks, holding on by the shaft, and sent men down to disengage the pinned fish and relieve their spears. The shot they made in this manner is a blind one—only on the chance of fish being there—and therefore always doubtful in its result.

Church Estate again. As the clouds and Kasoro's wilfulness were still against me, and the weather did not give hopes of a change, I sacrificed the taking of the latitude to gain time. I sent Bombay with Kasoro to the palace, asking for the Sakibobo himself to be sent with an order for five boats, five cows, and five goats, and also for a general order to go where I like, and do what I like, and have fish supplied me ; ' for, though I know the king likes me, his officers do not ; ' and then on separating I retraced my steps to the Church Estate.

To-day, after marching an hour, as there was now no need for hurrying, and a fine pongo buck, the Ngubbi of Uganda, offered a tempting shot, I proposed to shoot it for the men, and breakfast in a neighbouring village. This being agreed to, the animal was despatched, and we no sooner entered the village than

we heard that nsamma, a magnificent description of antelope, abound in the long grasses close by, and that a rogue elephant frequents the plantains every night. This tempting news created a halt. In the evening I killed a nsamma doe, an animal very much like the Kobus Ellipsiprymnus, but without the lunated mark over the rump; and at night, about 1 a.m., turned out to shoot an elephant, which we distinctly heard feasting on plantains; but rain was falling, and the night so dark, he was left till the morning.

I followed up the elephant some way, till a pongo offering an irresistible shot I sent a bullet through him, but he was lost after hours' tracking in the interminable large grasses. An enormous snake, with fearful mouth and fangs, was speared by the men. In the evening I wounded a buck nsamma, which, after tracking till dark, was left to stiffen ere the following morning; and just after this on the way home, we heard the rogue elephant crunching the branches not far off from the track; but as no one would dare follow me against the monster at this late hour, he was reluctantly left to do more injury to the gardens.

After a warm search in the morning we found the nsamma buck lying in some water; the men tried to spear him, but he stood at bay, and took another bullet. This was all we wanted, affording one good specimen; so, after breakfast, we marched to Kirindi, where the villagers, hearing of the sport we had had, and excited with the hopes of getting flesh, begged us to halt a day.

Not crediting the stories told by the people about the sport here, we packed to leave, but were no sooner ready than several men ran hastily in to say some fine

bucks were waiting to be shot close by. This was too powerful a temptation to be withstood, so, shouldering the rifle, and followed by half the village, if not more, women included, we went to the place, but, instead of finding a buck—for the men had stretched a point to keep me at their village—we found a herd of does, and shot one at the people's urgent request.

We reached this in one stretch, and put up in our old quarters, where the women of Mlondo provided pombé, plantains, and potatoes, as before, with occasional fish, and we lived very happily till the 10th, shooting buck, guinea-fowl, and florikan, when, Bombay and Kasoro arriving, my work began again. These two worthies reached the palace, after crossing twelve considerable streams, of which one was the Lũajerri, rising in the lake. The evening of the next day after leaving me at Kira, they obtained an interview with the king immediately; for the thought flashed across his mind that Bombay had come to report our death, the Waganda having been too much for the party. He was speedily undeceived by the announcement that nothing was the matter, excepting the inability to procure boats, because the officers at Urongani denied all authority but the Sakibobo's, and no one would show Bana anything, however trifling, without an express order for it.

Irate at this announcement, the king ordered the Sakibobo, who happened to be present, to be seized and bound at once, and said warmly, 'Pray, who is the king, that the Sakibobo's orders should be preferred to mine?' and then turning to the Sakibobo himself, asked what he would pay to be released? The Saki-

bobo, alive to his danger, replied at once, and without the slightest hesitation : Eighty cows, eighty goats, eighty slaves, eighty mbügü, eighty butter, eighty coffee, eighty tobacco, eighty jowari, and eighty of all the produce of Uganda. He was then released. Bombay said Bana wished the Sakibobo to come to Urondogani, and gave him a start with five boats, five cows, and five goats ; to which the king replied, ' Bana shall have all he wants, nothing shall be denied him, not even fish ; but it is not necessary to send the Sakibobo, as boys carry all my orders to kings as well as subjects. Kasoro will return again with you, fully instructed in everything, and, moreover, both he and Budja will follow Bana to Gani.' Four days, however, my men were kept at the palace ere the king gave them the cattle and leave to join me, accompanied with one more officer, who had orders to find the boats at once, see us off, and report the circumstance at court. Just as at the last interview, the king had four women, lately seized and condemned to execution, squatting in his court. He wished to send them to Bana, and when Bombay demurred, saying he had no authority to take women in that way, the king gave him one, and asked him if he would like to see some sport, as he would have the remaining women cut to pieces before him. Bombay, by his own account, behaved with great propriety, saying Bana never wished to see sport of that cruel kind, and it would ill become him to see sights which his master had not. Viarüngi sent me some tobacco, with kind regards, and said he and the Wazinza had just obtained leave to return to their homes, K'yengo alone, of all the guests, remaining behind as a hostage until Mtésa's powder-seeking Wakungü

returned. Finally, the little boy Lũgoi had been sent to his home. Such was the tenor of Bombay's report.

The officer sent to procure boats, impudently saying there were none, was put in the stocks by Kasoro, whilst other men went to Kirindi for sailors, and down the stream for boats. On hearing the king's order that I was to be supplied with fish, the fishermen ran away, and pombé was no longer brewed for fear of Kasoro.

IV

ALFRED RUSSEL WALLACE

I. THE HILL-DYAKS OF BORNEO

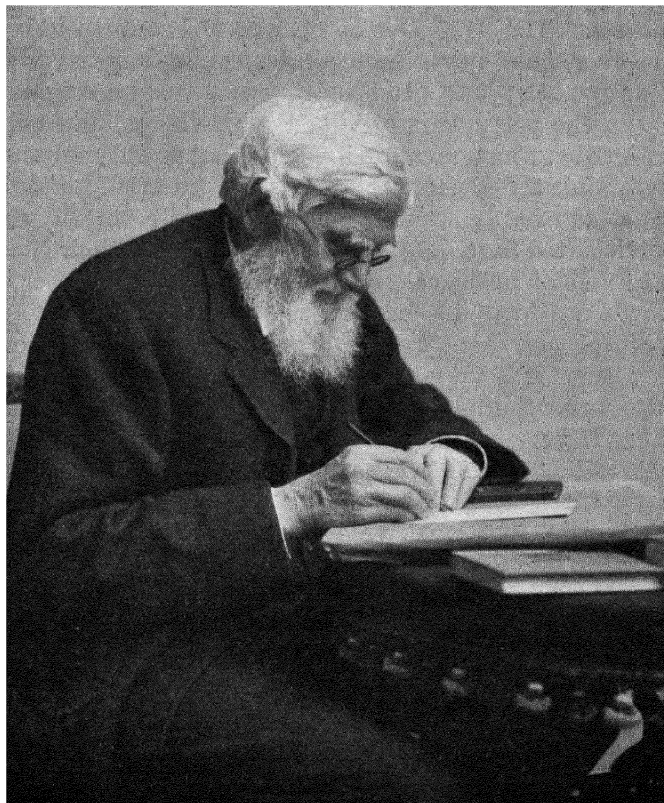
THE manners and customs of the aborigines of Borneo have been described in great detail, and with much fuller information than I possess, in the writings of Sir James Brooke, Messrs. Low, St. John, Johnson Brooke, and many others. I do not propose to go over the ground again, but shall confine myself to a sketch, from personal observation, of the general character of the Dyaks, and of such physical, moral, and social characteristics as have been less frequently noticed.

The Dyak is closely allied to the Malay, and more remotely to the Siamese, Chinese, and other Mongol races. All these are characterised by a reddish-brown or yellowish-brown skin of various shades, by jet-black straight hair, by the scanty or deficient beard, by the rather small and broad nose, and high cheekbones; but none of the Malayan races have the oblique eyes which are characteristic of the more typical Mongols. The average stature of the Dyaks is rather more than that of the Malays, while it is considerably under that of most Europeans. Their forms are well proportioned, their feet and hands small, and they rarely or never attain the bulk of body so often seen in Malays and Chinese.

I am inclined to rank the Dyaks above the Malays

in mental capacity, while in moral character they are undoubtedly superior to them. They are simple and honest and become the prey of the Malay and Chinese traders, who cheat and plunder them continually. They are more lively, more talkative, less secretive, and less suspicious than the Malay, and are therefore pleasanter companions. The Malay boys have little inclination for active sports and games, which form quite a feature in the life of the Dyak youths, who, besides outdoor games of skill and strength, possess a variety of indoor amusements. One wet day, in a Dyak house, when a number of boys and young men were about me, I thought to amuse them with something new, and showed them how to make ' cat's cradle ' with a piece of string. Greatly to my surprise, they knew all about it, and more than I did ; for, after I and Charles had gone through all the changes he could make, one of the boys took it off my hand, and made several new figures which quite puzzled me. They then showed me a number of other tricks with pieces of string, which seemed a favourite amusement with them.

Even these apparently trifling matters may assist us to form a truer estimate of the Dyaks' character and social condition. We learn thereby, that these people have passed beyond that first stage of savage life in which the struggle for existence absorbs the whole faculties, and in which every thought and idea is connected with war or hunting, or the provision for their immediate necessities. These amusements indicate a capability of civilisation, and aptitude to enjoy other than mere sensual pleasures, which might be taken advantage of to elevate their whole intellectual and social life.



DR. A. RUSSEL WALLACE

Photo. F. Chant.

The moral character of the Dyaks is undoubtedly high—a statement which will seem strange to those who have heard of them only as head-hunters and pirates. The Hill Dyaks of whom I am speaking, however, have never been pirates, since they never go near the sea ; and head-hunting is a custom originating in the petty wars of village with village, and tribe with tribe, which no more implies a bad moral character than did the custom of the slave-trade a hundred years ago imply want of general morality in all who participated in it. Against this one stain on their character (which in the case of the Saráwak Dyaks no longer exists) we have to set many good points. They are truthful and honest to a remarkable degree. From this cause it is very often impossible to get from them any definite information, or even an opinion. They say, ' If I were to tell you what I don't know, I might tell a lie ' ; and whenever they voluntarily relate any matter of fact, you may be sure they are speaking the truth. In a Dyak village the fruit trees have each their owner, and it has often happened to me, on asking an inhabitant to gather me some fruit, to be answered, ' I can't do that, for the owner of the tree is not here ' ; never seeming to contemplate the possibility of acting otherwise. Neither will they take the smallest thing belonging to an European. When living at Simunjon, they continually came to my house, and would pick up scraps of torn newspaper or crooked pins that I had thrown away, and ask as a great favour whether they might have them. Crimes of violence (other than head-hunting) are almost unknown ; for in twelve years, under Sir James Brooke's rule, there had been only one case of murder in a Dyak tribe, and that

one was committed by a stranger who had been adopted into the tribe. In several other matters of morality they rank above most uncivilised, and even above many civilised nations. They are temperate in food and drink, and the gross sensuality of the Chinese and Malays is unknown among them. They have the usual fault of all people in a half savage state—apathy and dilatoriness; but, however annoying this may be to Europeans who come in contact with them, it cannot be considered a very grave offence, or be held to outweigh their many excellent qualities.

During my residence among the Hill Dyaks, I was much struck by the apparent absence of those causes which are generally supposed to check the increase of population, although there were plain indications of stationary or but slowly increasing numbers. The conditions most favourable to a rapid increase of population are: an abundance of food, a healthy climate, and early marriages. Here these conditions all exist. The people produce far more food than they consume, and exchange the surplus for gongs and brass cannon, ancient jars, and gold and silver ornaments, which constitute their wealth. On the whole, they appear very free from disease, marriages take place early (but not too early), and old bachelors and old maids are alike unknown. Why, then, we must inquire, has not a greater population been produced? Why are the Dyak villages so small and so widely scattered while nine-tenths of the country is still covered with forest?

Of all the checks to population among savage nations mentioned by Malthus—starvation, disease, war, infanticide, immorality, and infertility of the women—the last is that which he seems to think least important,

and of doubtful efficacy ; and yet it is the only one that seems to me capable of accounting for the state of the population among the Saráwak Dyaks. The population of Great Britain increases so as to double itself in about fifty years. To do this it is evident that each married couple must average three children who live to be married at the age of about twenty-five. Add to these those who die in infancy, those who never marry, or those who marry late in life and have no offspring, the number of children born to each marriage must average four or five ; and we know that families of seven or eight are very common, and of ten and twelve by no means rare. But from inquiries at almost every Dyak tribe I visited, I ascertained that the women rarely had more than three or four children, and an old chief assured me that he had never known a woman have more than seven. In a village consisting of a hundred and fifty families, only one consisted of six children living, and only six of five children, the majority appearing to be two, three, or four. Comparing this with the known proportions in European countries, it is evident that the number of children to each marriage can hardly average more than three or four ; and as even in civilised countries half the population die before the age of twenty-five, we should have only two left to replace their parents ; and so long as this state of things continued, the population must remain stationary. Of course, this is a mere illustration ; but the facts I have stated seem to indicate that something of the kind really takes place ; and if so, there is no difficulty in understanding the smallness and almost stationary population of the Dyak tribes.

We have next to inquire what is the cause of the small

number of births and of living children in a family. Climate and race may have something to do with this, but a more real and efficient cause seems to me to be the hard labour of the women, and the heavy weights they constantly carry. A Dyak woman generally spends the whole day in the field, and carries home every night a heavy load of vegetables and firewood, often for several miles, over rough and hilly paths ; and not unfrequently has to climb up a rocky mountain by ladders, and over slippery stepping-stones, to an elevation of a thousand feet. Besides this, she has an hour's work every evening to pound the rice with a heavy wooden stamper, which violently strains every part of the body. She begins this kind of labour when nine or ten years old, and it never ceases but with the extreme decrepitude of age. Surely we need not wonder at the limited number of her progeny, but rather be surprised at the successful efforts of nature to prevent the extermination of the race.

One of the surest and most beneficial effects of advancing civilisation, will be the amelioration of the condition of these women. The precept and example of higher races will make the Dyak ashamed of his comparatively idle life, while his weaker partner labours like a beast of burthen. As his wants become increased and his taste refined, the women will have more household duties to attend to, and will then cease to labour in the field—a change which has already to a great extent taken place in the allied Malay, Javanese, and Bugis tribes. Population will then certainly increase more rapidly, improved systems of agriculture and some division of labour will become necessary in order to provide the means of existence, and a

more complicated social state will take the place of the simple conditions of society which now obtain among them. But, with the sharper struggle for existence that will then occur, will the happiness of the people as a whole be increased or diminished? Will not evil passions be aroused by the spirit of competition, and crimes and vices, now unknown or dormant, be called into active existence? These are problems that time alone can solve; but it is to be hoped that education and a high-class European example may obviate much of the evil that too often arises in analogous cases, and that we may at length be able to point to one instance of an uncivilised people who have not become demoralised and finally exterminated, by contact with European civilisation.

A few words, in conclusion, about the government of Saráwak. Sir James Brooke found the Dyaks oppressed and ground down by the most cruel tyranny. They were cheated by the Malay traders, and robbed by the Malay chiefs. Their wives and children were often captured and sold into slavery, and hostile tribes purchased permission from their cruel rulers to plunder, enslave and murder them. Anything like justice or redress for these injuries was utterly unattainable. From the time Sir James obtained possession of the country, all this was stopped. Equal justice was awarded to Malay, Chinaman, and Dyak. The remorseless pirates from the rivers farther east were punished, and finally shut up within their own territories, and the Dyak, for the first time, could sleep in peace. His wife and children were now safe from slavery; his house was no longer burnt over his head; his crops and his fruits were now his own to sell or con-

sume as he pleased. And the unknown stranger who had done all this for them, and asked for nothing in return, what could he be ? How was it possible for them to realise his motive ? Was it not natural that they should refuse to believe he was a man ? For of pure benevolence combined with great power, they had had no experience among men. They naturally concluded that he was a superior being, come down upon us to confer blessings on the afflicted. In many villages where he had not been seen, I was asked strange questions about him. Was he not as old as the mountains ? Could he not bring the dead to life ? And they firmly believe that he can give them good harvests, and make their fruit-trees bear an abundant crop.

In forming a proper estimate of Sir James Brooke's government, it must ever be remembered that he held Saráwak solely by the good-will of the native inhabitants. He had to deal with two races, one of whom, the Mahometan Malays, looked upon the other race, the Dyaks, as savages and slaves, only fit to be robbed and plundered. He has effectually protected the Dyaks, and has invariably treated them as, in his sight, equal to the Malays ; and yet he has secured the affection and good-will of both. Notwithstanding the religious prejudices of Mahometans, he has induced them to modify many of their worst laws and customs, and to assimilate their criminal code to that of the civilised world. That his government still continued, after 27 years—notwithstanding his frequent absences from ill-health, notwithstanding conspiracies of Malay chiefs, and insurrections of Chinese gold-diggers, all of which have been overcome by the support of the native population, and notwithstanding financial,

political, and domestic troubles—is due, I believe, solely to the many admirable qualities which Sir James Brooke possessed, and especially to his having convinced the native population, by every action of his life, that he ruled them, not for his own advantage, but for their good.

Since these lines were written, the noble spirit has passed away. But though, by those who knew him not, he may be sneered at as an enthusiastic adventurer, or abused as a hard-hearted despot, the universal testimony of every one who came in contact with him in his adopted country, whether European, Malay, or Dyak, will be, that Rajah Brooke was a great, a wise, and a good ruler—a true and faithful friend—a man to be admired for his talents, respected for his honesty and courage, and loved for his genuine hospitality, his kindness of disposition, and his tenderness of heart.

2. HOW THE RAJAH TOOK THE CENSUS

THE Rajah of Lombock was a very wise man, and he showed his wisdom greatly in the way he took the census. For my readers must know that the chief revenues of the Rajah were derived from a head-tax of rice, a small measure being paid annually by every man, woman, and child in the island. There was no doubt that every one paid this tax, for it was a very light one, and the land was fertile, and the people well off; but it had to pass through many hands before it reached the Government storehouses. When the harvest was over the villagers brought their rice to the Kapala Kampong, or head of the village; and no doubt he sometimes had compassion on the poor or

sick and passed over their short measure, and sometimes was obliged to grant a favour to those who had complaints against him ; and then he must keep up his own dignity by having his granaries better filled than his neighbours, and so the rice that he took to the ' Waidono ' that was over his district was generally a good deal less than it should have been. And all the ' Waidono ' had of course to take care of themselves, for they were all in debt, and it was so easy to take a little of the Government rice, and there would still be plenty for the Rajah. And the ' Gustis ' or princes who received the rice from the Waidonos helped themselves likewise, and so when the harvest was all over and the rice tribute was all brought in, the quantity was found to be less each year than the one before. Sickness in one district, and fever in another, and failure of the crops in a third, were of course alleged as the cause of this falling off ; but when the Rajah went to hunt at the foot of the great mountain, or went to visit a ' Gusti ' on the other side of the island, he always saw the villages full of people, all looking well-fed and happy. And he noticed that the krisses of his chiefs and officers were handsomer and handsomer ; and the handles that were of yellow wood were changed for ivory, and those of ivory were changed for gold, and diamonds and emeralds sparkled on many of them ; and he knew very well which way the tribute-rice went. But as he could not prove it he kept silence, and resolved in his own heart some day to have a census taken, so that he might know the number of his people, and not be cheated out of more rice than was just and reasonable.

But the difficulty was how to get this census. He

could not go into every village and every house, and count all the people ; and if he ordered it to be done by the regular officers they would quickly understand what it was for, and the census would be sure to agree exactly with the quantity of rice he got last year. It was evident therefore that to answer his purpose no one must suspect why the census was taken ; and to make sure of this, no one must know that there was any census taken at all. This was a very hard problem ; and the Rajah thought and thought, as hard as a Malay Rajah can be expected to think, but could not solve it ; and so he was very unhappy, and did nothing but smoke and chew betel with his favourite wife, and eat scarcely anything ; and even when he went to the cock-fight did not seem to care whether his best birds won or lost. For several days he remained in this sad state, and all the court were afraid some evil eye had bewitched the Rajah ; and an unfortunate Irish captain who had come in for a cargo of rice and who squinted dreadfully, was very nearly being krissed, but being first brought to the royal presence was graciously ordered to go on board and remain there while his ship stayed in the port.

One morning, however, after about a week's continuance of this unaccountable melancholy, a welcome change took place, for the Rajah sent to call together all the chiefs and priests and princes who were then in Mataram, his capital city ; and when they were all assembled in anxious expectation, he thus addressed them ;

' For many days my heart has been very sick and I knew not why, but now the trouble is cleared away, for I have had a dream. Last night the spirit of the

“Gunong Agong”—the great fire mountain—appeared to me, and told me that I must go up to the top of the mountain. All of you may come with me to near the top, but then I must go up alone, and the great spirit will again appear to me and will tell me what is of great importance to me and to you and to all the people of the island. Now go all of you and make this known through the island, and let every village furnish men to make clear a road for us to go through the forest and up the great mountain.’

So the news was spread over the whole island that the Rajah must go to meet the great spirit on the top of the mountain; and every village sent forth its men, and they cleared away the jungle and made bridges over the mountain streams and smoothed the rough places for the Rajah’s passage. And when they came to the steep and craggy rocks of the mountain, they sought out the best paths, sometimes along the bed of a torrent, sometimes along narrow ledges of the black rock; in one place cutting down a tall tree so as to bridge across a chasm, in another constructing ladders to mount the smooth face of a precipice. The chiefs who superintended the work fixed upon the length of each day’s journey beforehand according to the nature of the road, and chose pleasant places by the banks of the clear streams and in the neighbourhood of shady trees, where they built sheds and huts of bamboo well thatched with the leaves of palm-trees, in which the Rajah and his attendants might eat and sleep at the close of each day.

And when all was ready, the princes and priests and chief men came again to the Rajah, to tell him what had been done and to ask him when he would go up

the mountain. And he fixed a day, and ordered every man of rank and authority to accompany him, to do honour to the great spirit who had bid him undertake the journey, and to show how willingly they obeyed his commands. And then there was much preparation throughout the whole island. The best cattle were killed, and the meat salted and sun-dried ; and abundance of red peppers and sweet potatoes were gathered ; and the tall pinang-trees were climbed for the spicy betel-nut, the sirih-leaf was tied up in bundles, and every man filled his tobacco-pouch and lime-box to the brim, so that he might not want any of the materials for chewing the refreshing betel during the journey. And the stores of provisions were sent on a day in advance. And on the day before that appointed for starting, all the chiefs both great and small came to Mataram, the abode of the king, with their horses and their servants, and the bearers of their sirih boxes, and their sleeping-mats, and their provisions. And they encamped under the tall Waringin-trees that border all the roads about Mataram, and with blazing fires frightened away the ghouls and evil spirits that nightly haunt the gloomy avenues.

In the morning a great procession was formed to conduct the Rajah to the mountain. And the royal princes and relations of the Rajah mounted their black horses, whose tails swept the ground ; they used no saddle or stirrups, but sat upon a cloth of gay colours ; the bits were of silver and the bridles of many-coloured cords. The less important people were on small strong horses of various colours, well suited to a mountain journey ; and all (even the Rajah) were bare-legged to above the knees, wearing only the gay-coloured

cotton waste-cloth, a silk or cotton jacket, and a large handkerchief tastefully folded round the head. Every one was attended by one or two servants bearing his sirih and betel boxes, who were also mounted on ponies ; and great numbers more had gone in advance or waited to bring up the rear. The men in authority were numbered in hundreds and their followers in thousands, and all the island wondered what great thing would come of it.

For the first two days they went along good roads, and through many villages which were swept clean, and had bright cloths hung out at the windows ; and all the people when the Rajah came, squatted down upon the ground in respect, and every man riding got off his horse and squatted down also, and many joined the procession at every village. At the place where they stopped for the night, the people had placed stakes along each side of the roads in front of the houses. These were split crosswise at the top, and in the cleft were fastened little clay lamps, and between them were stuck the green leaves of palm-trees, which, dripping with the evening dew, gleamed prettily with the many twinkling lights. And few went to sleep that night till the morning hour, for every house held a knot of eager talkers, and much betel-nut was consumed, and endless were the conjectures what would come of it.

On the second day they left the last village behind them and entered the wild country that surrounds the great mountain, and rested in the huts that had been prepared for them on the banks of a stream of cold and sparkling water. And the Rajah's hunters, armed with long and heavy guns, went in search of deer and wild bulls in the surrounding woods, and brought

home the meat of both in the early morning, and sent it on in advance to prepare the mid-day meal. On the third day they advanced as far as horses could go, and encamped at the foot of high rocks, among which narrow pathways only could be found to reach the mountain-top. And on the fourth morning when the Rajah set out, he was accompanied by a small party of priests and princes with their immediate attendants; and they toiled wearily up the rugged way, and sometimes were carried by their servants, till they passed up above the great trees, and then among the thorny bushes, and above them again on to the black and burnt rock of the highest part of the mountain.

And when they were near the summit the Rajah ordered them all to halt, while he alone went to meet the great spirit on the very peak of the mountain. So he went on with two boys only who carried his sirih and betel and soon reached the top of the mountain among great rocks, on the edge of the great gulf whence issued forth continually smoke and vapour. And the Rajah asked for sirih, and told the boys to sit down under a rock and look down the mountain, and not to move till he returned to them. And as they were tired, and the sun was warm and pleasant, and the rock sheltered them from the cold wind, the boys fell asleep. And the Rajah went a little way on under another rock; and he was tired, and the sun was warm and pleasant, and he too fell asleep.

And those who were waiting for the Rajah thought him a long time on the top of the mountain, and thought the great spirit must have much to say, or might perhaps want to keep him on the mountain always, or perhaps he had missed his way in coming down

again. And they were debating whether they should go and search for him, when they saw him coming down with the two boys. And when he met them he looked very grave, but said nothing; and then all descended together, and the procession returned as it had come; and the Rajah went to his palace, and the chiefs to their villages and the people to their houses to tell their wives and children all that had happened, and to wonder yet again what would come of it.

And three days afterwards the Rajah summoned the priests and the princes and the chief men of Mataram, to hear what the great spirit had told him on the top of the mountain. And when they were all assembled, and the betel and sirih had been handed round, he told them what had happened. On the top of the mountain he had fallen into a trance, and the great spirit had appeared to him with a face like burnished gold, and had said: 'O Rajah! much plague and sickness and fevers are coming upon all the earth, upon men and upon horses and upon cattle; but as you and your people have obeyed me and have come up to my great mountain, I will teach you how you and all the people of Lombock may escape this plague.' And all waited anxiously to hear how they were to be saved from so fearful a calamity. And after a short silence the Rajah spoke again and told them that the great spirit had commanded that twelve sacred krisses should be made, and that to make them every village and every district must send a bundle of needles—a needle for every head in the village. And when any grievous disease appeared in any village, one of the sacred krisses should be sent there; and if every house in that village had sent the right number of needles,

the disease would immediately cease ; but if the number of needles sent had not been exact, the kris would have no virtue.

So the princes and chiefs sent to all their villages and communicated the wonderful news ; and all made haste to collect the needles with the greatest accuracy, for they feared that if but one were wanting the whole village would suffer. So one by one the headmen of the villages brought in their bundles of needles ; those who were near Mataram came first, and those who were far off came last ; and the Rajah received them with his own hands, and put them away carefully in an inner chamber, in a camphor-wood chest whose hinges and clasps were of silver ; and on every bundle was marked the name of the village and the district from whence it came, so that it might be known that all had heard and obeyed the commands of the great spirit.

And when it was quite certain that every village had sent in its bundle, the Rajah divided the needles into twelve equal parts, and ordered the best steel-worker in Mataram to bring his forge and his bellows and his hammers to the palace, and to make the twelve krisses under the Rajah's eye, and in the sight of all men who chose to see it. And when they were finished they were wrapped up in new silk and put away carefully until they might be wanted.

Now the journey to the mountain was in the time of the east wind when no rain falls in Lombock. And soon after the krisses were made it was the time of the rice harvest, and the chiefs of the districts and of villages brought in their tax to the Rajah according to the number of heads in their

villages. And to those that wanted but little of the full amount, the Rajah said nothing ; but when those came who brought only half or a fourth part of what was strictly due, he said to them mildly : ‘ The needles which you sent from your village were many more than came from such-a-one’s village, yet your tribute is less than his ; go back and see who it is that has not paid the tax.’ And the next year the produce of the tax increased greatly, for they feared that the Rajah might justly kill those who a second time kept back the right tribute. And so the Rajah became very rich, and increased the number of his soldiers, and gave golden jewels to his wives, and bought fine black horses from the white-skinned Hollanders, and made great feasts when his children were born or were married ; and none of the Rajahs or Sultans among the Malays were so great or so powerful as the Rajah of Lombock.

And the twelve sacred krisses had great virtue. And when any sickness appeared in a village, one of them was sent for ; and sometimes the sickness went away, and then the sacred kris was taken back again with great honour, and the headmen of the village came to tell the Rajah of its miraculous power, and to thank him. And sometimes the sickness would not go away ; and then everybody was convinced that there had been a mistake in their number of needles sent from that village, and therefore the sacred kris had no effect, and had to be taken back again by the headmen with heavy hearts, but still with all honour,—for was not the fault their own ?

3. RACES OF MAN IN THE MALAY ARCHIPELAGO

I MUST briefly explain the reasons that have led me to consider this division of the Oceanic races to be a true and natural one. The Malayan race, as a whole, undoubtedly very closely resembles the East Asian populations, from Syam to Mandchouria. I was much struck with this, when in the island of Bali I saw Chinese traders who had adopted the costume of that country, and who could then hardly be distinguished from Malays; and, on the other hand, I have seen natives of Java who, as far as physiognomy was concerned, would pass very well for Chinese. Then, again, we have the most typical of the Malayan tribes inhabiting a portion of the Asiatic continent itself, together with those great islands which, possessing the same species of large Mammalia with adjacent parts of the continent, have in all probability formed a connected portion of Asia during the human period. The Negritos are, no doubt, quite a distinct race from the Malay; but yet, as some of them inhabit a portion of the continent and others the Andaman Islands in the Bay of Bengal, they must be considered to have had, in all probability, an Asiatic rather than a Polynesian origin.

Now, turning to the eastern parts of the Archipelago, I find, by comparing my own observations with those of the most trustworthy travellers and missionaries, that a race identical in all its chief features with the Papuan is found in all the islands as far east as the Fijis; beyond this the brown Polynesian race, or some intermediate type, is spread everywhere over the Pacific. The descriptions of these latter often agree

exactly with the characters of the brown indigenes of Gilolo and Ceram.

It is to be especially remarked that the brown and the black Polynesian races closely resemble each other. Their features are almost identical, so that portraits of a New Zealander or Otaheitan will often serve accurately to represent a Papuan or Timorese, the darker colour and more frizzly hair of the latter being the only differences. They are both tall races. They agree in their love of art and the style of their decoration. They are energetic, demonstrative, joyous, and laughter-loving, and in all these particulars they differ widely from the Malay.

I believe, therefore, that the numerous intermediate forms that occur among the countless islands of the Pacific are not merely the result of a mixture of these races, but are, to some extent, truly intermediate or transitional; and that the brown and the black, the Papuan, the natives of Gilolo and Ceram, the Fijian, the inhabitants of the Sandwich Islands and those of New Zealand, are all varying forms of one Oceanic or Polynesian race.

It is, however, quite possible, and perhaps probable, that the brown Polynesians were originally the produce of a mixture of Malays or some lighter-coloured Mongol race with the dark Papuans; but if so, the intermingling took place at such a remote epoch, and has been so assisted by the continued influence of physical conditions and of natural selection, leading to the preservation of a special type suited to those conditions, that it has become a fixed and stable race with no signs of mongrelism, and showing such a decided preponderance of Papuan character, that it can best be classified as a

modification of the Papuan type. The occurrence of a decided Malay element in the Polynesian languages has evidently nothing to do with any such ancient physical connexion. It is altogether a recent phenomenon, originating in the roaming habits of the chief Malay tribe ; and this is proved by the fact that we find actual modern words of the Malay and Javanese languages in use in Polynesia, so little disguised by peculiarities of pronunciation as to be easily recognisable—not mere Malay roots only to be detected by the elaborate researches of the philologist, as would certainly have been the case had their introduction been as remote as the origin of a very distinct race—a race as different from the Malay in mental and moral, as it is in physical characters.

As bearing upon this question it is important to point out the harmony which exists between the line of separation of the human races of the Archipelago and that of the animal productions of the same country, which I have already so fully explained and illustrated. The dividing lines do not, it is true, exactly agree ; but I think it is a remarkable fact, and something more than a mere coincidence, that they should traverse the same district and approach each other so closely as they do. If, however, I am right in my supposition that the region where the dividing line of the Indo-Malayan and Austro-Malayan regions of zoology can now be drawn, was formerly occupied by a much wider sea than at present, and if man existed on the earth at that period, we shall see good reason why the races inhabiting the Asiatic and Pacific areas should now meet and partially intermingle in the vicinity of that dividing line.

It has recently been maintained by Professor Huxley that the Papuans are more closely allied to the negroes of Africa than to any other race. The resemblance, both in physical and mental characteristics, had often struck myself, but the difficulties in the way of accepting it as probable or possible have hitherto prevented me from giving full weight to those resemblances. Geographical, zoological, and ethnological considerations render it almost certain that, if these two races ever had a common origin, it could only have been at a period far more remote than any which has yet been assigned to the antiquity of the human race. And even if their unity could be proved, it would in no way affect my argument for the close affinity of the Papuan and Polynesian races, and the radical distinctness of both from the Malay.

Polynesia is pre-eminently an area of subsidence, and its great widespread groups of coral-reefs mark out the position of former lands and islands. The rich and varied, yet strangely isolated productions of Australia and New Guinea, also indicated an extensive land-area where such specialised forms were developed. The races of men now inhabiting these countries are, therefore, most probably the descendants of the races which inhabited these continents and islands. This is the most simple and natural supposition to make. And if we find any signs of direct affinity between the inhabitants of any other part of the world and those of Polynesia, it by no means follows that the latter were derived from the former. It is undoubtedly true that there are proofs of extensive migrations among the Pacific Islands, which have led to community of language from the Sandwich group to New Zealand ; but

there are no proofs whatever of recent migration from any surrounding country to Polynesia, since there is no people to be found elsewhere sufficiently resembling the Polynesian race in their chief physical and mental characteristics.

* * * * *

I have now concluded my task. I have given, in more or less detail, a sketch of my eight years' wanderings among the largest and the most luxuriant islands which adorn our earth's surface. I have endeavoured to convey my impressions of their scenery, their vegetation, their animal productions, and their human inhabitants. I have dwelt at some length on the varied and interesting problems they offered to the student of nature. Before bidding my readers farewell, I wish to make a few observations on a subject of yet higher interest and deeper importance, which the contemplation of savage life has suggested, and on which I believe that the civilised can learn something from the savage man.

We most of us believe that we, the higher races, have progressed and are progressing. If so, there must be some state of perfection, some ultimate goal, which we may never reach, but to which all true progress must bring us nearer. What is this ideally perfect social state towards which mankind ever has been, and still is tending? Our best thinkers maintain that it is a state of individual freedom and self-government, rendered possible by the equal development and just balance of the intellectual, moral, and physical parts of our nature,—a state in which we shall each be so perfectly fitted for a social existence, by knowing what is right, and at the same time feeling an irresistible

impulse to do what we know to be right, that all laws and all punishment shall be unnecessary. In such a state every man would have a sufficiently well-balanced intellectual organisation to understand the moral law in all its details, and would require no other motive but the free impulses of his own nature to obey that law.

Now it is very remarkable that among people in a very low stage of civilisation we find some approach to such a perfect social state. I have lived with communities of savages in South America and in the East, who have no laws or law courts but the public opinion of the village freely expressed. Each man scrupulously respects the rights of his fellow, and any infraction of those rights rarely or never takes place. In such a community, all are nearly equal. There are none of those wide distinctions, of education or ignorance, wealth or poverty, master and servant, which are the products of our civilisation ; there is none of that widespread division of labour, which, while it increases wealth, produces also conflicting interests ; there is not that severe competition and struggle for existence, or for wealth, which the dense population of civilised countries inevitably creates. All incitements to great crimes are thus wanting, and petty ones are repressed, partly by the influence of public opinion, but chiefly by that natural sense of justice and of his neighbour's right which seems to be, in some degree, inherent in every race of man.

Now, although we have progressed vastly beyond the savage state in intellectual achievements, we have not advanced equally in morals. It is true that among those classes who have no wants that cannot be easily

supplied, and among whom public opinion has great influence, the rights of others are fully respected. It is true, also, that we have vastly extended the sphere of those rights, and include within them all the brotherhood of man. But it is not too much to say, that the mass of our populations have not at all advanced beyond the savage code of morals, and have in many cases sunk below it. A deficient morality is the great blot of modern civilisation, and the greatest hindrance to true progress.

During the last century, and especially in the last thirty years, our intellectual and material advancement has been too quickly achieved for us to reap the full benefit of it. Our mastery over the forces of nature has led to a rapid growth of population, and a vast accumulation of wealth ; but these have brought with them such an amount of poverty and crime, and have fostered the growth of so much sordid feeling and so many fierce passions, that it may well be questioned, whether the mental and moral status of our population has not on the average been lowered, and whether the evil has not overbalanced the good. Compared with our wondrous progress in physical science and its practical application, our system of government, of administering justice, of national education, and our whole social and moral organisation, remains in a state of barbarism. And if we continue to devote our chief energies to the utilising of our knowledge of the laws of nature with the view of still further extending our commerce and our wealth, the evils which necessarily accompany these when too eagerly pursued, may increase to such gigantic dimensions as to be beyond our power to alleviate.

We should now clearly recognise the fact, that the wealth and knowledge and the culture of *the few* do not constitute civilisation, and do not of themselves advance us towards the 'perfect social state.' Our vast manufacturing system, our gigantic commerce, our crowded towns and cities, support and continually renew a mass of human misery and crime absolutely greater than has ever existed before. They create and maintain in lifelong labour an ever-increasing army, whose lot is the more hard to bear by contrast with the pleasures, and comforts, and the luxury which they see everywhere around them, but which they can never hope to enjoy ; and who, in this respect, are worse off than the savage in the midst of his tribe.

This is not a result to boast of, or to be satisfied with ; and, until there is more general recognition of this failure of our civilisation—resulting mainly from our neglect to train and develop more thoroughly the sympathetic feelings and moral faculties of our nature, and to allow them a larger share of influence in our legislation, our commerce, and our whole social organisation—we shall never, as regards the whole community, attain to any real or important superiority over the better class of savages.

This is the lesson I have been taught by my observations of uncivilised man. I now bid my readers—Farewell !

NOTE

Those who believe that our social condition approaches perfection will think the above word ¹ harsh and exaggerated, but it seems to me the only word that can be truly applied to us.

¹ 'barbarism,' p. 134 l. 27.

We are the richest country in the world, and yet nearly one-twentieth of our population are parish paupers and one-thirtieth known criminals. Add to these, the criminals who escape detection, and the poor who live mainly, or partly, on private charity (which, according to Dr. Hawkesley, expends seven millions sterling annually in London alone), and we may be sure that more than ONE-TENTH of our population are actually paupers and criminals. Both these classes we keep idle or at unproductive labour, and each criminal costs us annually in our prisons more than the wages of an honest agricultural labourer.

We allow over a hundred thousand persons known to have no means of subsistence but by crime, to remain at large and prey upon the community, and many thousand children to grow up before our eyes in ignorance and vice, to supply trained criminals for the next generation. This, in a country which boasts of its rapid increase in wealth, of its enormous commerce and gigantic manufactures, of its mechanical skill and scientific knowledge, of its high civilisation and its pure Christianity,—I can but term a state of social barbarism. We also boast of our love of justice, and that the law protects rich and poor alike, yet we retain money fines as a punishment, and make the very first steps to obtain justice a matter of expense—in both cases a barbarous injustice, or denial of justice to the poor. Again, our laws render it possible that, by mere neglect of a legal form, and contrary to his own wish and intention, a man's property may all go to a stranger, and his own children be left destitute. Such cases have happened through the operation of the laws of inheritance of landed property; and that such unnatural injustice is possible among us, shows that we are in a state of social barbarism. One more example to justify my use of the term, and I have done. We permit absolute possession of the soil of our country, with no legal rights of existence on the soil, to the vast majority who do not possess it. A great landholder may legally convert his whole property into a forest or a hunting-ground, and expel every human being who has hitherto lived upon it. In a thickly-populated country like England, where every acre has its owner and occupier, this is a power of legally destroying his fellow-creatures; and that such a power should exist, and be exercised by individuals, in however small a degree, indicates that, as regards true social science, we are still in a state of barbarism.

V

CHARLES MONTAGU DOUGHTY

I. THE NOMAD LIFE IN THE DESERT

WE journeyed, taking turns to walk and ride, and as Zeyd would changing our mantles, till the late afternoon ; he doubted then if we might come to the Aarab in this daylight. They often removing, Zeyd could not tell their camping-ground within a dozen or score miles. One of the last night's Ageyliens went along with us ; armed with a hammer, he drove my sick camel forward. As we looked for our Aarab we were suddenly in sight of the slow wavering bulks of camels feeding dispersedly under the horizon ; the sun nigh setting, they were driven in towards the Beduin camp, *menzil*, another hour distant. Come to the herdsmen, we alighted and sat down, and one of the lads receiving our bowl, ran under his nâgas to milk for us. This is khey'r Ullah (the Lord's bounty), not to be withheld from any wayfaring man, even though the poor owners should go supperless themselves. A little after, my companions enquired, if I felt the worse ; ' because,' said they, ' strangers commonly feel a pain after their first drinking camel-milk.' This somewhat harsh thin milk runs presently to hard curds in the stomach.

In approaching the Beduin tents I held back, with the Ageyly, observing the desert courtesy, whilst our host

Zeyd preceded us. We found this to be a small summer or 'flitting-tent,' which they called *héjra*, 'built' (thus they speak) upon the desert sand. Poor and low it seemed, unbecoming a great sheykh, and there was no gay carpet spread within : here was not the welfaring which I had known hitherto, of the northern Beduins. Zeyd led me in with his stern smiling ; and, a little to my surprise, I must step after him into the woman's apartment. These sometime emigrated Beduins have no suspicion of Nasrânies, whom they have seen in the north, and heard them reputed honest folk, more than the Moslemîn. There he presented me to his young wife : ' Khalîl (said he), here is thy new "aunt" (*ammatak*—hostess) ; and *Hirfa*, this is Khalîl ; and see thou take good care of him.' Before the morning the absent tribesmen had returned from the haj market ; the nomads lodged yet one day in the Borj Selmân ; the third morrow we removed. The height of this country is nearly 4500 feet.

The removing of the camp of the Aarab, and driving the cattle with them from one to another pasture ground, is called *râhla*. In their yesterday's mejlis they have determined whither and how early ; or was it left in the sheykh's hand, those in the neighbour booths watch when the day is light, to see if the sheykh's hareem yet strike his tent ; and, seeing this, it is the *râhla*. The Beduish housewives hasten then to pluck up the tent-pegs, and their booths fall ; the tent cloth is rolled up, the tent poles are gathered together and bound in a faggot ; so they drag out the household stuff, (bestowed in worsted sacks of their own weaving) to load upon the burden-camels. As neighbours see them and the next neighbours see those, all booths are



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presently cast in the wide dispersed menzil. The herdsmen now drive forward ; the hareem (plur. of *horma*, woman) mount with their baggage ; the men, with only their arms, sword or matchlock hanging at the saddle-tree behind them, and the long lances in their hands, ride forth upon their thelûls, they follow with the sheykh :—and this is the march of the nomad village. But if the sheykh’s tent remain standing and it is already an hour past sun-rising, when their cattle should be dismissed to pasture, the people begin to say : ‘ Let the beasts go feed then, there will be no r  hla to-day.’

This dawn, about the 16th February, was blustering and chill in that high country. *Sh  l*, ‘ load now ! ’ cried Zeyd ; and Hirfa, shivering and sighing, made up their household gear. Sheykhly husbands help not their feeble housewives to truss the baggage ; it were an indignity even in the women’s eyes. The men sit on, warming themselves over any blazing sticks they have gathered, till the latest moment, and commonly Zeyd made coffee. The bearing-camels are led in and couched between the burdens ; only the herdsman helps Hirfa to charge them upon the rude pack-saddles, *had  j*, a wooden frame of desert acacia timber, the labour of some nomad s  ny or Solubby. The under-set pad of old tent-cloth, *wittr*, is stuffed with some dry herbage, and all is girded under the camel’s belly with a simple cord. Zeyd, called to help lift the loads, for they were over-heavy, did it grudgingly, murmuring, ‘ Was a sheykh a porter to bear burdens ? ’ I also helped them to stay up the weighty half-loads in the sides of the saddles until both were laid even and coupled. Zeyd was a lordling in no contemptible tribe. Such a

sheykh should not in men's sight put the hand to any drudgery ; he leaves it to his hind.

A great sheykh may take upon him part care of his own mare, in the menzil, whilst the hinds are all day herding in the field ; yet having led her to the well, if there be any, by, of the common tribesmen the sheykh will call him to draw her water. Nevertheless sheykhs' sons whilst they are children, and later as young men armed, are much abroad with the tribe's cattle and companions with the herdsmen. I have seen Zeyd go out with a grass-hook to cut his mare's forage and bring again a mantle-full on his back, and murmuring with woe in his black visage, it was Selím his son's duty ; and the boy, oftentimes disobedient, he upbraided, calling him his life's torment, *Sheytàn*, only never menacing him, for that were far from a Beduin father's mind.

We removed hardly ten miles, and pitched four hours to the eastward of Dâr-el-Hamra. The hareem busily ' build ' their tents ; but the men, as they have alighted, are idle, that when not herding or riding in a foray sit all day at home only lazing and lording. ' The *jowwâr* ' (Bed. housewives), say they, ' are for the labour of the household and to be under discipline.' Zeyd, with a footcast in the sand-bank where we had taken shelter from the gusty wind till the *beyts* were standing, had made an hearth ; then he kneeled with the Beduin cheerfulness to kindle our gipsy fire. Selím gathered sticks, and we sat down to warm ourselves and roast locusts.

Here we lodged two days, and removed anew five hours eastward through the same sandy moorland, with mild weather, and pitched in the camping-ground

el-Antarîeh. Sweet and light in these high deserts is the uncorrupt air, but the water is scant and infected with camel urine. Hirfa doled out to me, at Zeyd's commandment, hardly an ounce or two of the precious water every morning, that I might wash 'as the towns-people.' She thought it unthrift to pour out water thus when all day the thirsty tribesmen have not enough to drink. Many times between their waterings, there is not a pint of water left in the greatest sheykh's tents; and when the goodman bids his housewife fill the bowl to make his guests' coffee, it is answered from their side, 'We have no water.' Too much of a great sheykh's provision is consumed by his mare; the horse, of all cattle in the desert, is most impatient of thirst. Zeyd used oftentimes this fair excuse, (being miserable even in the poor dispense of coffee), 'There is no water.' Motlog the great sheykh coming one of these mornings to visit me, enquired first, 'Hast thou drunk coffee?'—'Not to-day, they say *there is no water*.'—'What!' he asked, 'has not Zeyd made you coffee this morning?' for even poorer sheykhs will not fail to serve the morrow's cup, each one to his own fellowship. Motlog knew his cousin Zeyd, and smiled, saying, 'What is this, Zeyd has no water!' but Khalîl, come over to us, and I will make thee coffee.' He led me to his tent, which was not far off, where, sitting at the hearth, and being himself the sheykh of his tribe, he roasted, brayed and boiled, and prepared this cup of hospitality for the Christian stranger. In that place it chanced Zeyd to lose a camel, which had been frayed by wolves. He mounted his mare at the morrow's light, and rode forth with the long shivering horseman's lance upon his shoulders to follow her traces. The day

after Zeyd returned to us, driving in his lost beast : he had found her near Birket Moaddam.

After three days the Aarab removed south-eastward twelve miles, and pitched at the camping-ground *Khushsherkiâsh*. It was now the 22nd February, and we found here the *rabîa*, or new spring of sweet blossoming herbage ; the most was of wild rape kind, pimperl and sorrel, *humstîs*. The *rabîa* is the yearly refreshment, nay, the life of the nomad's cattle. Delightful to the eye, in the desert land, was that poor faery garden of blossoms. When the Beduins saw me pensive, to admire the divine architecture of those living jewels, they thought it but childish fondness in the stranger. If I did but ask the names of the simples it was roughly answered, ' The name of them all is *el-usshib*,' " the spring forage," very good for our small cattle and camels.' This high doughty country is plain for some days' journeys ; mostly sand soil and sandstone gravel, without furrows of seyls or wadies ; it is an upland, which in the light Arabian rains never runs down with water.

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The camels now feeding of the sappy *rabîa* were *jezzîn* or ' not drinking.' In good spring years they are in these *dîras* almost two and a half months *jezzîn*, and not driven to the watering. Then the force of life is spent of the herb lately so fresh upon the earth, and withering under the sun it is dried up. If, after some shower, the great drinkless cattle find rain-water lodged in any hollow rocks, I have seen them slow to put down their heavy long necks ; so they snuff to it, and bathing but the borders of their flaggy lips, blow them out and shake the head again as it were with

loathing. The nomads' camels are strong and frolic in these fat weeks of the spring pasture. Now it is they lay up flesh, and grease in their humps, for the languor of the desert summer and the long year. Driven home full-bellied at sunset, they come hugely bouncing in before their herdsman: the householders, going forth from the booths, lure to them, as they run lurching by, with loud *Wolloo-wolloo-wolloo*, and to stay them, *Wòh-ho, wòh-ho, wòh-ho!* they chide any that strike the tent-cord with *hutch!* The camels are couched every troop beside, about, and the more of them before the booth of their household; there all night they lie ruckling and chawing their huge cud till the light of the morrow. The Aarab say that their camels never sleep; the weary brute may stretch down his long neck upon the ground, closing awhile his great liquid eyes; but after a space he will right again the great languid carcass and fall to chawing.' In this fresh season they ride to graze anew in the moonlight, and roam from the booths of the slumbering Aarab; but fearful by nature, they stray not very far off. Sometimes wakening after midnight and seeing our camels strayed, I went out to bring them in; but the Beduins said, 'Sleep on, Khalil, there is no cause; let them go feeding as they will.' They would see them pasture now all they can; but not seldom they are bereaved thus of their cattle by prowling night-robbers. Camels, the only substance of the nomads, are the occasion of all their contending. '*Neshil*, we load,' say they, 'upon them, and we drink *halib*, the milk of them.' The cows go twelve months with young; now was their time of calving, which falls at the beginning of the *rabia*. The nomad year is divided in this sort; *er-rabia*, spring-

time of three months; *el-gáyth*, midsummer, three months; *es-sferry*, fall of the year, three months; *es-shitá* (pronounce *és-sh'tá*), winter. To be a ready man in this kind of lore, is clerkship with the Beduw, and to have a wayfarer's knowledge of the stars. When they found good pasture the Beduins encamped, and we lodged upon that ground mostly till the third or fourth morrow. The nomads dwelling, the day over, in any place, they say, 'el-Aarab *um-jemmîn*' (*j* for *k* guttural), or the camp is standing. The herdsmen bring word of the pasture about them, and as the sheykhs determine in the mejlis the people will remove again, it was commonly to twelve or thirteen miles distance; and now their 'face was toward' Teyma.

If the *ráhla* be short the Beduw march at leisure, the while their beasts feed under them. The sheykhs are riding together in advance, and the hareem come riding in their trains of baggage-camels; if aught be amiss the herdsmen are nigh at hand to help them: neighbours will dismount to help neighbours and even a stranger. The great and small cattle are driven along with their households. You shall see housewives dismount, gossips walk on together barefoot (all go here unshod) and spinning beside their slow-pacing camels. But, say the Beduin husbands, 'We would have the hareem ride always and not weary themselves, for their tasks are many at home.' The Fukara women alighted an hour before noon, in the march, to milk their few ewes and goats. Every family and kindred are seen wayfaring by themselves with their cattle. The Aarab thus wandering are dispersed widely; and in the vast uneven ground (the most plain indeed but full of crags), although many hundreds be on foot together, commonly we see

only those which go next about us. The Beduins coming near a stead where they will encamp, Zeyd returned to us ; and where he thought good, there struck down the heel of his tall horseman's lance, *shelfa* or *romhh*, stepping it in some sandy desert bush : this is the standard of Zeyd's fellowship,—they that encamp with him, and are called his people. Hirfa makes her camel kneel ; she will ' build ' the booth there : the rest of Zeyd's kindred and clients coming up, they alight, each family going a little apart, to pitch their booths about him. This is ' Zeyd's menzil,' and the people are Zeyd's Aarab. The bearing-camels they make to kneel under their burdens with the guttural voice, *ikh-kh-kh* ! The stiff neck of any reluctant brute is gently stricken down with the driving-stick or an hand is imposed upon his heavy halse ; any yet resisting is plucked by the beard ; then without more he will fall groaning to his knees. Their loads discharged, and the pack-saddles lifted, with a spurn of the master's foot the bearing-camels rise heavily again and are dismissed to pasture. The housewives spread the tent-cloths, taking out the corner and side-cords ; and finding some wild stone for a hammer, they beat down their tent-pegs into the ground, and under-setting the tent-stakes or ' pillars ' (*am'dàn*) they heave and stretch the tent-cloth ; and now their booths are standing. The wife enters, and when she has bestowed her stuff, she brings forth the man's breakfast ; that is a bowl of léban, poured from the sour milk-skin, or it is a clot of dates with a bowl of the desert water : for guest-days it is dates and buttermilk with a piece of sweet butter. After that she sits within, rocking upon her knees the *semíla* or sour milk-skin to make this day's butter.

As Zeyd, so is every principal person of these Beduins the chief of a little menzil by itself : the general encampment is not disposed (as is the custom of the northern Aarab) in any formal circuit. The nomads of these marches pitch up and down in all the ' alighting place ' at their own pleasure. The Fejîr or Fukara never wandered in *ferjân* (*j* for *k* guttural) or nomad hamlets, dispersedly after their kindreds, which is everywhere the nomad manner, for the advantage of pasture ; but they journey and encamp always together. And cause was that, with but half-friends, and those mostly outraged upon their borders, or wholly enemies, there were too many reckonings required of them ; and their country lies open. Zeyd's Aarab were six booths : a divorced wife's tent, mother of his young and only son, was next him ; then the tent of another cast-off housewife, mother of a ward of his, *Settâm*, and by whom he had himself a daughter ; and besides these, (Zeyd had no near kinsfolk) a camel-herd with the old hind his father, of Zeyd's father's time, and the shepherd, with their alliance. Forlorn persons will join themselves to some sheykh's menzil, and there was with us an aged widow, in wretchedness, who played the mother to her dead daughter's fatherless children, a son so deformed that like a beast he crept upon the sand [*ya latîf*, ' oh, happy sight ! ' said this most poor and desolate grandam, with religious irony, in her patient sighing]—and an elf-haired girl, wonderfully foul-looking. Boothless, they led their lives under the skies of God ; the boy was naked as he came into the desert world. The camel upon which they rode was an oblation of the common charity ; but what were their daily food only that God knoweth which feedeth all life's creatures.

There is no Beduwy so impious that will chide and bite at such, his own tribesfolk, and mock those whom God has so sorely afflicted ; nor any may repulse them wheresoever they will alight in the common wilderness soil. Sometimes there stood a stranger's booth among us, of nomad passengers or an household in exile from the neighbour tribesmen : such will come in to pitch by a sheykh of their acquaintance.

Hirfa ever demanded of her husband toward which part should 'the house' be built. 'Dress the face,' Zeyd would answer, 'to this part,' showing her with his hand the south, for if his booth's face be all day turned to the hot sun there will come in fewer young loitering and parasitical fellows that would be his coffee-drinkers. Since the sheukh, or heads, alone receive their tribe's surra, it is not much that they should be to the arms coffee-hosts. I have seen Zeyd avoid as he saw them approach, or even rise ungraciously upon such men's presenting themselves, (the half of every booth, namely the men's side, is at all times open, and any enters there that will, in the free desert,) and they murmuring, he tells them, wellah, his affairs do call him forth. adieu, he must away to the mejlis, go they and seek the coffee elsewhere. But were there any sheykh with them, a coffee lord, Zeyd could not honestly choose but abide and serve them with coffee ; and if he be absent himself, yet any sheykhly man coming to a sheykh's tent, coffee must be made for him, except he gently protest, 'billah, he would not drink.' Hirfa, a sheykh's daughter and his nigh kinswoman, was a faithful mate to Zeyd in all his sparing policy.

Our menzil now standing, the men step over to Zeyd's

coffee-fire, if the sheykh be not gone forth to the mejlis to drink his midday cup there. A few gathered sticks are flung down beside the hearth : with flint and steel one stoops and strikes fire in tinder, he blows and cherishes those seeds of the cheerful flame in some dry camel-dung, sets the burning sherd under dry straws, and powders over more dry camel-dung. As the fire kindles, the sheykh reaches for his *dellâl*, coffee-pots, which are carried in the *fatya*, coffee-gear basket ; this people of a nomad life bestow each thing of theirs in a proper *beyt*, it would otherwise be lost in their daily removing. One rises to go fill up the pots at the water-skins, or a bowl of water is handed over the curtain from the woman's side ; the pot at the fire, Hirfa reaches over her little palm-full of green coffee-berries. We sit in a half ring about the hearth ; there come in perhaps some acquaintance or tribesmen straying between the next menzils. Zeyd prepared coffee at the hours ; afterward, when he saw in me little liking of his coffee-water, he went to drink the cup abroad ; if he went not to the mejlis, he has hidden himself two or three hours like an owl, or they would say as a dog, in my little close tent, although intolerably heated through the thin canvas in the midday sun. It was a mirth to see Zeyd lie and swelter, and in a trouble of mind bid us report to all comers that ' Zeyd was from home ' : and where his elvish tribesmen were merry as beggars to detect him. *Mukkarîn el-Beduw* ! ' the nomads,' (say the settled Arabs) ' are full of wily evasions.'

The sheykhs and principal persons assemble at the great sheykh's or another chief tent, when they have alighted upon any new camping-ground ; there they

drink coffee, the most holding yet the camel-stick, *mishaab*, *mehján* or *bakhorra*, as a sceptre, (a usage of the ancient world,) in their hands. The few first questions among them are commonly of the new dispositions of their several menzils : As, ‘ *Rahyel* ! (the sheykh’s brother), *fen ahl-ak* ? where be thy people (pitched) ? *Eth-Therryeh* (the sheykh’s son), *fen ahl-ak* ? *Mehsan* (a good, simple man, and who had married Zeyd’s only sister), *Khálaf* and the rest, where be your menzils ? Zeyd is not here ! who has seen Zeyd ? and *Mijwel*, where are his Aarab ? ’ for every new march displaces these nomads, and few booths in the shortness of the desert horizon are anywhere in sight. You see the Beduins silent whilst coffee is being made ready, for all their common talk has been uttered an hundred times already, and some sit beating the time away and for pastime limning with their driving-sticks in the idle sand. They walk about with these gay sticks, in the daytime : but where menzils are far asunder, or after nightfall, they carry the sword in their hands : the sword is suspended with a cord from the shoulder. The best metal is the Ajamy, a little bent with a simple crossed hilt (beautiful is the form), wound about with metal wire ; next to the Persian they reckon the Indian blade, *el-Hindy*.

In nomad ears this word, Aarab, signifies ‘ the people.’ Beduin passengers when they meet with herdsmen in the desert enquire, *Fen el-Aarab* ? ‘ where is the folk ? ’ Of the multitude of nomad tribes east and west, they say in plural wise, *el-Arbân*. This other word, Beduin, received into all our languages, is in the Arabian speech Bedûwy, that is to say inhabitant of the waste (*bâdia*), in the plural *Bedaûwy* (aû-diphth.), but com-

monly *él-Bèduw*. As we sit, the little cup, of a few black drops, is served twice round. When they have swallowed those boiling sips of coffee-water, and any little news has been related among them, the men rise one after another to go home over the hot sand : all are barefoot, and very rarely any of those Aarab has a pair of sandals. So every one is come again to his own, they say the midday prayers ; and when they have breakfasted, they will mostly slumber out the sultry midday hours in their housewife's closed apartment. I have asked an honest wife, ' How may your lubbers slug out these long days till evening ? ' and she answered, demurely smiling, ' How, sir, but in solace with the harem ! '

The *héjra*, or small flitting-tent, laid out by the housewife, with its cords stretched to the pins upon the ground, before the *am'dàn* or props be set up under, is in this form : to every pair of cords, is a pair of stakes ; there are three stakes to every pair of cords in the waist of the tent. Greater booths are stayed by more pairs of waist-cords, and stand upon taller staves. The Aarab tent, which they call the *beyt* (pl. *byût*) *es-shaar*, ' abode, booth, or house of hair,' that is of black worsted or hair-cloth, has, with its pent-roof, somewhat the form of a cottage. The tent-stuff, strong and rude, is defended by a list sewed under at the heads of the *am'dàn*, and may last out, they say, a generation, only wearing thinner ; but when their roof-cloth is threadbare it is a feeble shelter, thrilled by the darting beams of the Arabian sun, and casting only grey shadow. The Arabian tent strains strongly upon all the staves, and in good holding ground may resist the boisterous blasts which happen at the crises of the

year, especially in some deep mountainous valleys. Even in weak sand the tents are seldom overblown. Yet the cords, *tunb el-beyt*, which are worsted-twist of the women's spinning, oft-times burst: who therefore (as greater sheykhs) can spend silver, will have them of hempen purchased in the town. In all the road tribes they every year receive rope, with certain clothing and utensils, on account of their haj-surra. The tent-stuff is seamed of narrow lengths of the housewives' rude worsted weaving; the yarn is their own spinning, of the mingled wool of the sheep and camels' and goats' hair together. Thus it is that the cloth is blackish: we read in the Hebrew Scripture, 'Black as the tents of Kedar.' Good webster-wives weave in white borders made of their sheep's wool, or else of their gross-spun cotton yarn (the cotton wool is purchased from Medina or the sea coast).

When the tent-cloth is stretched upon the stakes, to this roof they hang the tent-curtains, often one long skirt-cloth which becomes the walling of the nomad booth: the selvages are broached together with wooden skewers. The booth front is commonly left open, to the half at least we have seen, for the *mukaad* or men's sitting-room: the other, which is the women's and household side, is sometimes seen closed (when they would not be espied, whether sleeping or cooking) with a fore-cloth; the woman's part is always separated from the men's apartment by a hanging, commonly not much more than breast or neck high, at the waistpoles of the tent. The *mukaad* is never fenced in front with a tent-cloth, only in rain they incline the *am'dàn* and draw down the tent eaves lower. The nomad tents are thus very ill lodging, and the Beduins, clothed

no better than the dead, suffer in cold and stormy weather. In winter they sometimes load the back-cloth ground-hem with great stones, and fence their open front at the men's side with dry bushes. The tent side-cloths can be shifted according to the wind and sun: thus the back of the Beduin booth may become in a moment the new front. A good housewife will bethink herself to unpin and shift the curtain, that her husband's guests may have shadow and the air, or shelter.

Upon the side of the hareem, that is the household apartment, is stored all their husbandry. At the woman's curtain stand the few tent-cloth sacks of their poor baggage, *el-gush*: in these is bestowed their corn and rice if they have any; certain lumps of rock-salt, for they will eat nothing insipid; also the housewife's thrift of wool and her spun yarn,—to be a good wool-wife is honourable among Aarab women; and some fathoms perhaps of new calico. There may be with the rest a root of *er'n* or tan-wood, the scarlet chips are steeped in water, and in two or three days, between *ráhlas*, they cure therein their goat-skins for girbies and semílies, besides the leather for watering-buckets, watering-troughs, and other nomad gear. The poorest wife will have some box, (commonly a fairing from the town,) in which are laid up her few household medicines, her comb and her mirror, *mèrguba*, her poor inherited ornaments, the ear-rings and nose-ring of silver or even golden (from the former generations); and with these any small things of her husband's (no pockets are made in their clothing), which she has in her keeping. But if her good-man be of substance, a sheykh of *surra*, for his bundle of reals and her few

precious things she has a locked coffer painted with vermilion from Medina, which in the *ráhla* is trussed (also a mark of sheykhly estate) upon her bearing-camel. Like to this I have mused, might be that ark of things sacred to the public religion, which was in the nomad life of B. Israel.

Commonly the housewife's key of her box is seen as a glittering pendant, upon her veil backward ; and hangs, with her thimble and pincers, (to pluck the thorns out of their bare soles,) by a gay scarlet lace, from the circlet of the head-band. Their clotted dates, if they have any, are stived in heavy pokes of camel-hide, that in the *ráhla* are seen fluttering upon the bearing-cattle with long thongs of leather. This apparel of fringes and tassels is always to the Semitic humour ; of the like we read in Moses, and see them in the antique Jewish sculptures. Of their old camel sack-leather, moisty with the juice of the dates, they cut the best sandals. The full-bellied sweating water-skins are laid, not to fret at the ground, upon fresh sprays of broom or other green in the desert ; amongst all stands the great brazen pot, *jidda*, tinned within by the nomad smith, or by the artificer in their market village. They boil in it their butter, (when they have any, to make *samn*,) and their few household messes ; they see the guest-meal therein in the day of hospitality.

The Aarab *byút shaar* are thus tents of hair-cloth, made housewise. The ‘houses of hair’ accord with that sorry landscape ! Tent is the Semitic house : their clay house is built in like manner ; a public hall for the men and guests, and an inner woman's and household apartment. Like to this was Moses' adorned

house of the nomad God in the wilderness. Also the firmament, in the Hebrew prophet, is a tabernacle of the one household of God's creation. These flitting-houses in the wilderness, dwelt in by robbers, are also sanctuaries of 'God's guests,' *theûf Ullah*, the passengers and who they be that haply alight before them. Perilous rovers in the field, the herdsmen of the desert are kings at home, fathers of hospitality to all that seek to them for the night's harbour. 'Be we not all,' say the poor nomads, '*guests of Ullah?*' Has God given unto them, God's guest shall partake with them thereof: if they will not for God render His own, it should not go well with them. The guest entered, and sitting down amongst them, they observe an honourable silence, asking no untimely questions, (such is school and nurture of the desert,) until he have eaten or drunk somewhat at the least, and by 'the bread and salt' there is peace established between them, for a time (that is counted two nights and the day in the midst, whilst their food is in him). Such is the golden world and the 'assurance of Ullah' in the midst of the wilderness: travelled Beduins are amazed to see the sordid inhospitality of the towns; but where it were impossible that the nomad custom should hold.

Zeyd told us one day his old chance at Damascus (the tribe was then in the North); and how he had disputed in this sense with a government man (Dowlâny) of late, some Haj officer, *Whether were nigher unto God the life of townsfolk or of the Aarab*.—Officer: 'Some of you neither pray nor fast, the Beduw are incessantly riding in forays; ye are manslaughterers for a little booty, and violent reavers of other men's goods. God wot, and though your mouths confess the Prophet, ye be

little better than the *kuffâr* (heathen,—Jews and Christians). Ye discern not betwixt the *halâl* and the *harrâm*; but we, knowing the good and the evil, are the better Moslemîn.'—Zeyd: 'All this I can grant; but hearken! a stranger alighting at a Beduin booth, we welcome him, and are busy to serve him, and we prepare the guest-supper; and when he has eaten, in the same place he sleeps, in the assurance of Ullah, and with the morning light he rises up refreshed to hold on his journey. But ha! when I came to es-Sham, riding upon my thelûl, it was an evening (at the supping hour), and passing weary and hungry by the sùk, I alighted before some door where I thought to take my night-lodging. As I knocked, one cries within, "*Min?* Who? who?" I answered, "*Thaif!* (a guest) and O thou behind the door, open quickly!" But the voice said, "O thou which standest knocking, seek further down the sùk, where is many a house, and there is nothing here; go in peace, good man." This is the manner with them all, and they are not ashamed, billah! Then, not having tasted food that day (the wayfaring nomad eats not till his alighting), I lay me down in the dust of your street, slain with hunger and seeking to slumber. This is their dealing with strangers which enter your towns!—And wellah the Dowlâny allowed our life to be nigher unto God, because of the hospitality.' So much they hold of this godly human virtue, as wherein a man may be just before the 'Bountiful Ullah,' and like to a poor player of the Divine Providence. With all this, there lacks not Arabic hospitality in the good city of Damascus; it is little less than I have afterwards seen in the upland Arabian towns. There are worthy sheykhs in the

Medân, that village quarter of es-Shem, men of the antique simplicity, which keep nearly the open hospitality of the outlying villages.

2. LIFE IN THE WANDERING VILLAGE

But to speak now of the nomad inhabitants and how they lead their lives. El-Beduw *ma yetaabun*, 'toil not' (say they), that is not bodily; but their spirits are made weary with incessant apprehension of their enemies, and their flesh with continual thirst and hunger. The necessitous lives of the Aarab may hardly reach to a virtuous mediocrity; they are constrained to be robbers. 'The life in the desert is better than any, *if there were not the Beduw*,' is said proverbially by oases' Arabians; the poor Beduins they think to be full of iniquity, *melaun el-weyladeyn*, 'Of cursed kind, upon both sides, of their father and mother.' Pleasant is the sojourn in the wandering village, in this purest earth and air, with the human fellowship, which is all day met at leisure about the cheerful coffee fire, and amidst a thousand new prospects. Here, where we now alighted, is, this day's rest, to-morrow our home will be yonder. The desert day returning from the east, warns the Beduin awake, who rises to his prayers; or it may be, unwitting of the form, he will but murmur toward heaven the supplication of his fearful human nature, and say, 'Ah Lord my God!'—and, 'Oh that this day may be fortunate; give Thou that we see not the evil!' Of daily food they have not half enough, and if any head of the cattle be taken!—how may his household yet live? Bye and bye the herdsman is ready, and his beasts are driven far from his sight.

No sweet chittering of birds greets the coming of the desert light, besides man there is no voice in this waste drought. The Beduins, that lay down in their cloaks upon the sandy mother-earth in the open tents, hardly before the middle night, are already up and bestirring themselves. In every coffee-sheikh's tent there is new fire blown in the hearth, and he sets on his coffee-pots ; then snatching a coal in his fingers, he will lay it in his tobacco-pipe. The few coffee-beans received from his housewife are roasted and brayed ; as all is boiling, he sets out the little cups, *fenjeyl* (for *fenjeyn*), which we saw have been made, for the uningenious Arabs, in the West. When, with a pleasant gravity, he has unbuckled his *gutia* or cup-box, we see the nomad has not above three or four fenjeyns, wrapt in a rusty clout, with which he scours them busily, as if this should make his cups clean. The roasted beans are pounded amongst Arabs with a magnanimous rattle—and (as all their labour) rhythmical—in brass of the town, or an old wooden mortar, gaily studded with nails, the work of some nomad smith. The water bubbling in the small dellâl, he casts in his fine coffee powder, *el-bunn*, and withdraws the pot to simmer a moment. From a knot in his kerchief he takes then an head of cloves, a piece of cinnamon or other spice, *bahar*, and braying these, he casts their dust in after. Soon he pours out some hot drops to essay his coffee ; if the taste be to his liking, making dexterously a nest of all the cups in his hand with pleasant clattering, he is ready to pour out for the company, and begins upon his right hand ; and first, if such be present, to any considerable sheikh and principal persons. The *fenjeyn kahwa* is but four sips : to fill it up to a guest, as in the northern

towns, were among Beduins an injury, and of such bitter meaning, 'This drink thou and depart.' Then is often seen a contention in courtesy amongst them, especially in any greater assemblies, who shall drink first. Some man that receives the fenjeyn in his turn, will not drink yet,—he proffers it to one sitting in order under him, as to the more honourable: but the other putting off with his hand will answer *ebbeden*, 'Nay, it shall never be, by Ullah! but do thou drink!' Thus licensed, the humble man is despatched in three sips, and hands up his empty fenjeyn. But if he have much insisted, by this he opens his willingness to be reconciled with one not his friend. That neighbour, seeing the company of coffee-drinkers watching him, may with an honest grace receive the cup, and let it seem not willingly: but an hard man will sometimes rebut the other's gentle proffer.

Some may have taken lower seats than becoming their sheykhly blood, of which the nomads are jealous; entering untimely, they sat down out of order, sooner than trouble all the company. A sheykh, coming late and any business going forward, will often sit far out in the assembly; and show himself a popular person in this kind of honourable humility. The more inward in the booths is the higher place; where also is, with the sheykhs, the seat of a stranger. To sit in the loose circuit without and before the tent, is for the common sort. A tribesman arriving presents himself at that part, or a little lower, where in the eyes of all men his pretension will be well allowed; and in such observances of good nature, is a nomad man's honour among his tribesmen. And this is nigh all that serves the nomad for a conscience, namely, that which men

will hold of him. A poor person approaching from behind, stands obscurely, wrapped in his tattered mantle, with grave ceremonial, until those sitting indolently before him in the sand shall vouchsafe to take notice of him : then they rise unwillingly, and giving back, enlarge the coffee-circle to receive him. But if there arrive a sheykh, a coffee-host, a richard amongst them of a few cattle, all the coxcomb companions within will hail him with their pleasant adulation, *taad hennéyi*, 'Step thou up hither.'

The astute Fukara sheukh surpass all men in their coffee-drinking courtesy, and Zeyd himself was more than any, large of this gentleman-like imposture : he was full of swaggering complacence and compliments to an humbler person. With what suavity could he encourage, and gently too compel a man, and rising himself yield him parcel of another man's room ! In such fashions Zeyd showed himself a bountiful great man, who indeed was the greatest niggard. The cups are drunk twice about, each one sipping after other's lips without misliking ; to the great coffee-sheykhs the cup may be filled more times, but this is an adulation of the coffee-server. There are some of the Fukara sheukh so delicate Sybarites, that of those three bitter sips, to draw out all their joyance, twisting, turning, and tossing again the cup, they could make ten. The coffee-service ended, the grounds are poured out from the small into the great store-pot that is reserved full of warm water : with the bitter lye, the nomads will make their next bever, and think they spare coffee.

This of the greater coffee gatherings : but to speak rather of the small daily company in a private sheykh's menzil, drawn together to the clatter of the good man's

surbût or coffee-pestle. Grave, with levity, is the indolent nomad man's countenance. As many Beduin heads, so many *galliûns* or tobacco-pipes, with commonly nothing to put in them. Is any man seen to have a little of the coveted leaf, knotted in his kerchief, he durst not deny to divide it with them,—which if he withheld, yet pretending mirth, the rest would have it from him, perforce. If there be none found among them, they sit raking the old filth out of their *galliûns* and, with sorry cheer, put the coal upon that, which they have mixed with a little powdered dry camel-dung or some sere herbage: thus they taste at least a savour (such sweetness to them) of tobacco, whereof, when they are any while deprived, I have seen them chop their pipe-stems small for the little tobacco moisture which remained in them; and laying a coal upon this drenched wood they 'drink' in the fume with a last solace.

The best pipe-heads are those wrought in stone by the hands of the Beduins; the better stone is found two days below Héjr, and by Teyma. Besides they use the *sebîl*, or earthenware bent tube of the Syrian haj market. Their *galliûn* stem is made of the branch of some wild fig-tree, grown by desert waters, or of plum-tree from the oasis; they bore it with a red-hot iron over the evening watch-fires. Comfortatives of the brain and vital spirits, and stay of importunate hunger, we find the Arabian nomads abandoned to the usage of coffee and tobacco; in both they all observe the same customs and ceremony, which we might imagine therefore, without book, to be come down in their generations from some high antiquity. So much are they idly given to these tent pleasures, that many

Beduins think they may hardly remember themselves of a morning, till they have sipped coffee, and 'drunk' upon it a galliûn of tobacco. The coveted solace of the grape, in the veins of their old idol-worshipping fathers, is no more remembered by the Beduin tradition; even their former artillery, the bows and arrows, hardly two centuries laid down, I have found almost out of mind amongst them. We see the Arabian race lasting without change, only less than their eternal deserts; but certain inventions (guns, tobacco, coffee) sprung up in the world, and falling, like their religion, to the national humour, have as hastily prevailed among them. Even the outlying great waste Peninsula is carried by the world's great changes! History shows a marvellous levity of their hundred tribes; part fearing for themselves, and partly in the hope of booty, converting (so they will ever to the stronger), in one generation, from their ancient idols to the new and soon grown faction of Mohammed in religion. * * *

* * * For the Beduins sitting in the coffee-tent of their *menzil*, when the sun mounts it, is time to go over to the *mejlis*, 'sitting,' the congregation or parliament of the tribesmen. There also is the public coffee-drinking held at Motlog's or some other one of the chief sheykhs' worsted 'houses'; where the great sheykh and the coffee companions may that morrow be assembled; for where their king bee is found, there will the tribesmen assemble together. The *mejlis*-seekers wending through the wide encampment, enquire of any they meet, 'The *mejlis*, where? eigh weled! hast thou seen the sheukh sitting?' In this parliament they commune together of the common affairs; they reason of

their policy in regard of Ibn Rashîd, the Dowla, the tribes about them. Here is reported what any may have heard of the movement of foemen, or have signs been seen of a ghrattu : tidings from time to time are brought in of their own or foreign waters ; householders tell of the pasture found yesterday by their dispersed herdsmen. Let him speak here who will, the voice of the least is heard among them ; he is a tribesman. The mejlis forecast the next journeys of the tribe, whereof the kind of running advice remains in all their minds, which they call *es-shor* ; this is often made known to their allies, and is very necessary to any of themselves that are about to take a journey.

This is the council of the elders and the public tribunal : hither the tribesmen bring their causes at all times, and it is pleaded by the maintainers of both sides with busy clamour ; and every one may say his word that will. The sheykh meanwhile takes counsel with the sheukh, elder men and more considerable persons ; and judgement is given commonly without partiality and always without bribes. This sentence is final. The loser is mulcted in heads of small cattle or camels, which he must pay anon, or go into exile, before the great sheykh send executors to distrain any beasts of his, to the estimation of the debt. The poor Beduins are very unwilling payers, and often think themselves unable at present : thus, in every tribe, some households may be seen of other tribes' exiles.

Their justice is such that in the opinion of the next governed countries, the Arabs of the wilderness are the justest of mortals. Seldom the judge and elders err, in these small societies of kindred, where the life of every tribesman lies open from his infancy and his

state is to all men well known. Even their suits are expedite as all the other works of Arabs. Seldom is a matter not heard and resolved in one sitting. Where the accusation is grave and some are found absent that should be witnesses, their cause is held over to another hearing. The nomad justice is mild where the Hebrew Law, in this smelling of the settled countries, is crude. In the desert there is no human forfeit, there is nothing even in homicide, if the next to the blood withhold not their assent, which may not be composed, the guilty paying the amends (rated in heads of cattle). The Hebrew Law excised the sores in the commonwealth, and the certainty of retaliation must weigh and prick in the minds of evil-doers. The Beduwy has no more to fear before him than a fine afar off ; he may escape all if his evil heart sufficeth him, only going from his own kin into perpetual exile.

* * * * *

Pleasant, as the fiery heat of the desert daylight is done, is our homely evening fire. The sun gone down upon a highland steppe of Arabia, whose common altitude is above three thousand feet, the thin dry air is presently refreshed, the sand is soon cold ; wherein yet at three fingers' depth is left a sunny warmth of the past day's heat until the new sunrise. After a half hour it is the blue night, and the clear hoary star-light in which there shines the girdle of the milky way, with a marvellous clarity. As the sun is setting, the nomad housewife brings in a truss of sticks and dry bushes, which she has pulled or hoed with a mattock (a tool they have seldom) in the wilderness ; she casts down this provision by our hearth-side, for the sweet-smelling evening fire. But to Hirfa, his sheykhly young

wife, Zeyd had given a little Beduin maid to help her. The housewife has upon her woman's side an hearth apart, which is the cooking-fire. Commonly Hirfa baked them, under the ashes, a bread-cake for the stranger ; Zeyd her husband, who is miserable, or for other cause, eats not yet, but only near midnight, as he is come again from the mejlis and would go in to sleep.

At this first evening hour, the Beduw are all *fî ahl-ha*, in their households, to sup of such wretchedness as they may have ; there is no more wandering through the wide encampment, and the coming in then of any persons, not strangers, were an unseemly 'ignorance.' The foster-camels lie couched, before the booth of hair ; and these Beduins let them lie still an hour, before the milking. The great feeble brutes have wandered all day upon the droughty face of the wilderness ; they may hardly crop their fills, in those many hours, of so slender pastures. The mare stands tethered before the booth at the woman's side, where there is not much passage. Such dry wire-grass forage as they find in that waste, is cast down beside her. When the Arabs have eaten their morsel and drunken *léban* of the flock, the few men of our *menzil* begin to assemble about the sheykh's hearth, where is some expectation of coffee. The younger or meanest of the company, who is sitting or leaning on his elbow or lies next the faggot, will indolently reach back his hand from time to time for more dry rimth, to cast on the fire, and other sweet resinous twigs, till the flaming light leaps up again in the vast uncheerful darkness. The nomads will not burn the good pasture bushes, *gussha*, even in their enemies' country. It is the bread of the cattle. I have

sometimes unwittingly offended them, until I knew the plants, plucking up and giving to the flames some which grew in the soil nigh my hand; then children and women and the men of little understanding blamed me, and said wondering, 'It was an heathenish deed.'

Glad at the fall of the empty daylight, the householders sit again to make talk, or silent and listless, with the drooping gravity of brute animals. Old men, always weary, and the herdsmen, which were all day abroad in the sun, are lying now upon an elbow (this is the right Aarab posture, and which Zeyd would have me learn and use), about the common fire. But the reposing of the common sort at home is to lie heels out backward, about the hearth, as the spokes of a wheel, and flat upon their bellies (which they even think appeases the gnawing of hunger); and a little raising themselves, they discourse staying upon their breasts and two elbows: thus the men of this lean nation will later sleep, spreading only their tattered cloaks under them, upon the wild soil (*béled*), a posture even reproved by themselves. *Béled*, we saw in the mouth of the nomads, is the inhabited soil of the open desert and also of the oasis; they say of the dead, 'He is under the *béled*.' *Dîra*, the Beduin circuit, is heard also in some oases for their town settlement.—I asked Zeyd, 'Then say ye the *béled* is our mother?' 'Ay well, and surely, *Khalîl*; for out of the ground took God man and all return thither.' They asking me of our custom, I said, 'You are ground-sitters, but we sit high upon stools like the *Tûrk*.'—The legs of chair-sitters to hang all day they thought an insufferable fatigue. 'Khalîl says well,' answers Zeyd, who, a sheykh of Aarab, had been in high presence of pashas

and government men at Damascus ; and he told how he found them sitting in arm-chairs and (they are all cross-leg Orientals) with a leg crossed over the other, a shank or a foot ; ‘ a simple crossed foot is of the under functionaries : but to lap a man’s shin (Zeyd showed us the manner), he said to be of their principal personages.’ The Arabs asked me often, if we sat gathered in this kindly sort about our evening fires ? and if neighbours went about to neighbour byût, seeking company of friends and coffee-drinking ?

Sitting thus, if there any one rises, the mare snorts softly, looking that it is he who should now bring her delicious bever of warm camel-milk, and gazing after him, she whinnies with pleasance. There is a foster camel to every nomad mare, since they taste no corn, and the harsh desert stalks could not else sustain her : the horse, not ruminating and losing much moisture by the skin, is a creature very impatient of hunger and thirst. His mare is therefore not a little chargeable to a sheykh in the desert, who must burden oftentimes another camel with her provision of water. Twice she will drink, and at the hottest of the summer season even thrice in a daylight ; and a camel-load of girbies may hardly water her over two days. Who has wife or horse, after the ancient proverb, may rue, he shall never be in rest, for such brittle possessions are likely to be always ailing. Yet under that serene climate, where the element is the tent of the world, the Beduw have little other care of their mares ; it is unknown in the desert so much as to rub them. They milk first for the mare and then (often in the same vessel) for the nomad household. She stands straining upon her tether, looking toward the pleasant sound of milking :

the bowl frothing from the udder is carried to her in the herdsman's hand, and she sups through her teeth the sweet warm milk, at a long draught. The milking time of camels is but once in the day, at evening, unless a little be drawn for some sick person or stranger in the morning, or for any wayfaring man in the day-time. The small cattle, *ghrannen* or *dubbush*, are milked at sunset ; only in rich spring districts, the housewives may draw their teats again in the morning. The dubbush are milked by their housewives, the milch camels by the men and lads only. Spring is the milky season, when men and beasts (if the winter rain failed not) fare at the best in the wilderness. With small cattle, it lasts only few weeks from the yeanning till the withering of the year be again upon them, when the herb is dried up ; but the camel kine are nearly eleven months in milk.

So needful is the supplement of milk to the desert horses, that when, in the dry summer or at some other low times, the camels are driven wide from the standing menzil to be *azab*, absent certain days, that is in quest of pasture, the mare also is led along with them in her master's troop, to drink the foster milk. But if the sheykh have need of his mare then at home, he will nourish her, as he may, without the wet-nurse, mixing at evening a bowl of *mereesy* or dry milk rubbed in water. Mereesy is the butter-milk of the flock, dried by boiling to the hard shard, and resembles chalk. It is a drink much to thank God for, in lean times, and in the heat of the year, in the wilderness ; in the long dead months when there is no milk, it is every day dearer and hard to be come by. Excellent to take upon journeys, mereesy is gipsy drink, and no dainty in the

border countries ; but in the Arabian oases it is much esteemed to use with their unwholesome date diet, which alone were too heating. Mereesy (' that which rubbed between the palms of the hand, can be mingled with water') or dry milk, is called by many other names in the provinces of Arabia, as *thiràn*, and *bùggila*, *baggl*, in West Nejd ; in the south and towards Mecca, *múthir*. Butter is the poor nomad's market ware : with this they can buy somewhat in the towns for their household necessities. Having only mereesy in the saddle-bags, and water before us every third day on the road, I have not doubted to set out upon long voyages in the *khála*. Mereesy will remain unaltered till the next season ; it is good in the second year, only growing harder. The best were to grind it to flour, as they do in Kasím ; and this stirred, with a little sugar, in a bowl of the desert water, is a grateful refreshment after the toil and heat of the desert journey.

A pleasure it is to listen to the cheerful musing Beduin talk, a lesson in the travellers' school of mere humanity, —and there is no land so perilous which by humanity he may not pass, for man is of one mind everywhere, ay, and in their kind, even the brute animals of the same foster earth—a timely vacancy of the busy-idle cares which cloud upon us that would live peaceably in the moral desolation of the world. And pleasant those sounds of the spretting milk under the udders in the Arabs' vessels ! Food for man and health at a draught in a languishing country. The bowl brought in foaming the children gather to it, and the guest is often bidden to sup with them, with his fingers, the sweet froth, *orghra* or *roghrwa*, *irtugh* : or this milk poured into the sour milk-skin and shaken there a moment,

the housewife serves it forth again to their suppers with that now gathered sourness which they think the more refreshing.

The nomad's eyes are fixed upon the crude congruity of Nature ; even the indolence in them is austere. They speak of the things within their horizon. Those loose ' Arabian tales ' of the great border-cities, were but profane ninnery to their stern natural judgement. Yet so much they have of the Semitic Oriental vein, without the doting citizen fantasy, that many dream all their lives of hidden treasures ; wealth that may fall to them upon a day out of the lap of heaven. Instead of the cities' taling, the Aarab have their braying rhapsodies, which may be heard in every wild nomad hamlet, as those of the Beny Helál. The Arabs are very credulous of all that is told beyond their knowledge, as of foreign countries. All their speech is homely ; they tell of bygone forays and of adventures in their desert lives. You may often hear them in their tale quote the rhythms between wisdom and mirth of the *kasasíd* (riming desert poets without letters) ; the best are often widely current among the tribes. In every tribe are makers : better than any in this country were the *kassâds* of Bishr. The *kassâd* recites, and it is a pleasant adulation of the friendly audience to take up his last words in every couplet. In this poetical eloquence I might not very well, or hardly at all, distinguish what they had to say ; it is as strange language. The word *shâer*, ' he that feeleth,' a poet, is unused by them ; the Beduins knew not the word. Zeyd answered, ' It is *nadém*.' The Beduin singer draws forth stern and horrid sounds from the *rabeyby* or viol of one bass string, and delivers his mind, braying forcedly

in the nose It is doubtless a very archaic minstrelsy, in these lands, but a hideous desolation to our ears. It is the hinds, all day in the wilderness with the cattle, who sing most lustily in their evening homecoming to the humanity of the byût. I often asked for a *kasîda* of Abeyd Ibn Rashîd, and have found no singer in this country who was not ready with some of them. The young herdsmen of Zeyd's menzil would chant for the stranger the most evening-times the robust *hadû*, or herding-song. [This word *rabeyby* is perhaps the Spaniard's *rabal*, and that was in Ancient England *revel*, *rebibel*.] The Beduw make the instrument of any box-frame they may have from the towns: a stick is thrust through, and in this they pierce an eye above for the peg; a kid-skin is stretched upon the hollow box; the hoarse string is plucked from the mare's tail; and setting under a bent twig, for the bridge, their music is ready.

The nomad's fantasy is high, and that is ever clothed in religion. They see but the indigence of the open soil about, full of dangers, and hardly sustaining them, and the firmament above them, habitation of the Divine salvation. These Ishmaelites have a natural musing conscience of the good and evil, more than other men; but none observe them less in all their dealings with mankind. The civil understanding of the desert citizens is found in their discourse (tempered between mild and a severe manly grace) and liberal behaviour. * * *

* * * The nomads, at leisure and lively minds, have little other than this study to be eloquent. Their utterance is short and with emphasis. There is a perspicuous propriety in their speech, with quick significance.

The Arabian town-dwellers contemn this boisterous utterance of the sons of wilderness ; they themselves are fanatic sectators of the old Koran reading. Asiatics, the Aarab are smiling speakers. All Beduin talk is one manner of Arabic, but every tribe has a use, *loghra*, and neighbours are ever chiders of their neighbours' tongue. ' The speech of them,' they will say, ' is somewhat awry,' '*awaj*.' In the mouth of the Fukara sheykhs, was a lisping of the terminal consonants. The Moahîb talk was open and manly. In that dry serenity of the air, and largely exercised utterance of the many difficult articulations of their language, the human voice, *hess*, is here mostly clear and well-sounding ; unless it be in some husk choking throat of heart-sore misery.

There is as well that which is displeasing in their homely talk. The mind is distempered by idleness and malice ; they will hardly be at pains to remember suddenly, in speech, their next tribesman's name ; and with this is their barbarous meddling curiosity, stickling mistrust one of another, and beggarly haggling for any trifle, with glosing caresses, (would they obtain a thing, and which are always in guile,) impudent promises and petulant importunity. And their hypocrite iniquitous words, begetting the like, often end in hideous clamour, which troubling ' the peace of Ullah ' in the nomad booth, are rebuked by the silent impatience of the rest, of whom the better will then proffer themselves as peace-makers. The herdsmen's tongue is full of infantile raillery and, in sight and hearing of the other sex, of jesting ribaldry : they think it innocent mirth, since it is God that has founded thus our nature. * * *

*** There are certain gestures used among them, which are tokens of great significance. I smooth my beard toward one to admonish him, in his wrongful dealing with me, and have put him in mind of his honour. If I touch his beard, I put him in remembrance of our common humanity and of the witness of God which is above us. Beard is taken in Arabia for human honour, and to pluck it is the highest indignity; of an honest man they say, *lahyat-hu taîba*, 'His is a good beard'; of a vile covetous heart, *mâ lihu lahya*, 'He has no beard.' The suppliant who may bind, as I have heard, a certain knot in the other's kerchief, has saved himself: and were the other the avenger for blood, yet he must forbear for God! Kiss an angry man's forehead, and his rancour will fall; but the adversary must be taken by surprise, or he will put forth stern hostile hands to oppose thee. Surely a very ancient example of the Semitic sacramental gestures is that recorded of Abraham, who bids his steward put the hand under his thigh, to make his oath sure. A simple form of requiring an honourable tolerance and protection is to say; *Ana nuzîlak*, 'I have alighted at thy tent,' or say, where thou fearest treachery, *Ana nusik*, and again, *Ana bi wejhak ya sheykh*, 'Sir, I am under thy countenance'; more solemnly, and touching him, *Terâny billah ya sheykh; wa bak ana dakhîlak*, which may signify, 'By the Lord thou seest me, and I do enter, Sir, under thy protection.' In my long dangerous wanderings in the Arabian peninsula I have thrice said this one word *dakhîlak*: twice when, forsaken in the deserts, I came to strange tents of Heteym (they are less honourable than Beduins, and had repulsed me); once to the captain of the guard at Hâyil, when I

Three years ago I visited Yatung in May. In spring-time there is a profusion of colour. The valley is beautiful, beyond the beauty of the grandest Alpine scenery, carpeted underfoot with spring flowers, and ablaze overhead with flowering rhododendrons. To try to describe mountains and forests is a most unprofitable task ; all the adjectives of scenic description are exhausted ; the coinage has been too long debased. For my own part, it has been almost a pain to visit the most beautiful parts of the earth and to know that one's sensations are incommunicable, that it is impossible to make people believe and understand. To those who have not seen, scenery is either good, bad, or indifferent ; there are no degrees. Ruskin, the greatest master of description, is most entertaining when he is telling us about the domestic circle at Herne Hill. But mountain scenery is of all the most difficult to describe. The sense of the Himalayas is intangible. There are elusive lights and shades, and sounds and whispers, and unfamiliar scents, and a thousand fleeting manifestations of the genius of the place that are impossible to arrest. Magnificent, majestic, splendid, are weak, colourless words that depict nothing. It is the poets who have described what they have not seen who have been most successful. Milton's hell is as real as any landscape of Byron's, and the country through which Childe Roland rode to the Dark Tower is more vivid and present to us than any of Wordsworth's Westmoreland tarns and valleys. So it is a poem of the imagination—'Kubla Khan'—that seems to me to breathe something of the spirit of the Yatung and Chumbi Valleys, only there is a little less of mystery and gloom here, and a little more of sunshine and

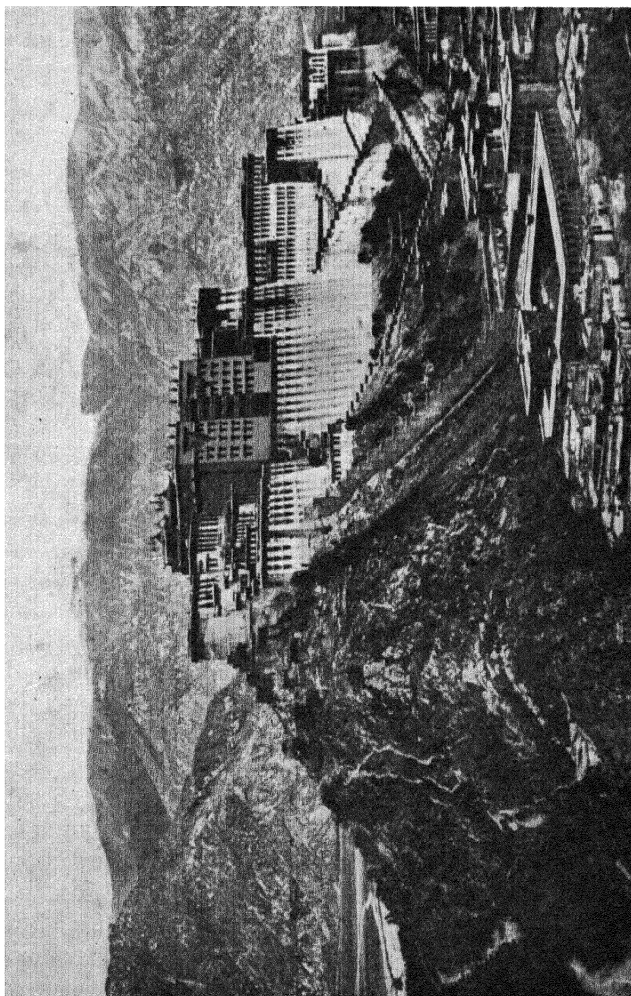


Photo. E. N. A.
A General View of Lhasa, showing the Potala, the headquarters of the Dalai Lama.

brightness than in the dream poem. Instead of attempting to describe the valley—Paradise would be easier to describe—I will try to explain as logically as possible why it fascinated me more than any scenery I have seen.

I had often wondered if there were any place in the East where flowers grow in the same profusion as in Europe—in England, or in Switzerland. The nearest approach I had seen was in the plateau of the Southern Shan States, at about 4,000 feet, where the flora is very homelike. But the ground is not *carpeted*; one could tread without crushing a blossom. Flowers are plentiful, too, on the southern slopes of the Himalayas, and on the hills on the Siamese side of the Tennasserim frontier, but I had seen nothing like a field of marsh-marigolds and cuckoo-flowers in May, or a meadow of buttercups and daisies, or a bank of primroses, or a wood carpeted with bluebells, or a hillside with heather, or an Alpine slope with gentians and ranunculus. I had been told that in Persia in springtime the valleys of the Shapur River and the Karun are covered profusely with lilies, also the forests of Manchuria in the neighbourhood of the Great White Mountain; but until I crossed the Jelapla and struck down the valley to Yatung I thought I would have to go West to see such things again. Never was such profusion. Besides the primulas—I counted eight different kinds of them—and gentians and anemones and celandines and wood sorrel and wild strawberries and irises, there were the rhododendrons glowing like coals through the pine forest. As one descended the scenery became more fascinating; the valley narrowed, and the stream was more boisterous. Often the cliffs hung sheer over the

water's edge ; the rocks were coated with green and yellow moss, which formed a bed for the dwarf rhododendron bushes, now in full flower, white and crimson and cream, and every hue between a dark reddish brown and a light sulphury yellow—not here and there, but everywhere, jostling one another for nooks and crannies in the rock.

These delicate flowers are very different from their dowdy cousin, the coarse red rhododendron of the English shrubbery. At a little distance they resemble more hothouse azaleas, and equal them in wealth of blossom.

The great moss-grown rocks in the bed of the stream were covered with equal profusion. Looking behind, the snows crowned the pine-trees, and over them rested the blue sky. And here is the second reason—as I am determined to be logical in my preference—why I found the valley so fascinating. In contrasting the Himalayas with the Alps, there is always something that the former is without. Never the snows, and the water, and the greenery, at the same time ; if the greenery is at your feet, the snows are far distant ; where the Himalayas gain in grandeur they lose in beauty. So I thought the wild valley of Lauterbrunnen, lying at the foot of the Jungfrau, the perfection of Alpine scenery until I saw the valley of Yatung, a pine-clad mountain glen, green as a hawthorn hedge in May, as brilliantly variegated as a beechwood copse in autumn, and culminating in the snowy peak that overhangs the Jelapla. The valley has besides an intangible fascination, indescribable because it is illogical. Certainly the light that played upon all these colours seemed to me softer than everyday sunshine ; and the

opening spring foliage of larch and birch and mountain ash seemed more delicate and varied than on common ground. Perhaps it was that I was approaching the forbidden land. But what irony, that this seductive valley should be the approach to the most bare and unsheltered country in Asia !

Even now, in February, I can detect a few salmon-coloured leaf-buds, which remind me that the month of May will be a revelation to the mission force, when their veins are quickened by the unfamiliar warmth, and their eyes dazzled by this unexpected treasure which is now germinating in the brown earth.

Four miles beyond Chumbi the road passes through the second military wall at the Chinese village of Gob-sorg. Riding through the quiet gateway beneath the grim, hideous figure of the goddess Dolma carved on the rock above, one feels a silent menace. One is part of more than a material invasion ; one has passed the gate that has been closed against the profane for centuries ; one has committed an irretrievable step. Goddess and barrier are symbols of Tibet's spiritual and material agencies of opposition. We have challenged and defied both. We have entered the arena now, and are to be drawn into the vortex of all that is most sacred and hidden, to struggle there with an implacable foe, who is protected by the elemental forces of nature.

Inside the wall, above the road, stands the Chinese village of Gob-sorg. The Chinamen come out of their houses and stand on the revetment to watch us pass. They are as quiet and ugly as their gods. They gaze down on our convoys and modern contrivances with a silent contempt that implies a consciousness of imme-

morial superiority. Who can tell what they think or what they wish, these undividable creatures? They love money, we know, and they love something else that we cannot know. It is not country, or race, or religion, but an inscrutable something that may be allied to these things, that induces a mental obstinacy, an unfathomable reserve which may conceal a wisdom beyond our philosophy or mere callousness and indifference. The thing is there, though it has no European name or definition. It has caused many curious and unexplained outbreaks in different parts of the world, and it is no doubt symbolised in their inexpressibly hideous flag. The element is non-conductive, and receives no current from progress, and it is therefore incommunicable to us who are wrapped in the pride of evolution. The question here and elsewhere is whether the Chinese love money more or this inscrutable dragon element. If it is money, their masks must have concealed a satisfaction at the prospect of the increased trade that follows our flag; if the dragon element, a grim hope that we might be cut off in the wilderness and annihilated by Asiatic hordes.

Unlike the Chinese, the Tomos are unaffectedly glad to see us in the valley. The humblest peasant is the richer by our presence, and the landowners and traders are more prosperous than they have been for many years. Their uncompromising reception of us makes a withdrawal from the Chumbi Valley impossible, for the Tibetans would punish them relentlessly for the assistance they have given their enemies.

A mile beyond Gob-sorg is the Tibetan village of Galing-ka, where the praying-flags are as thick as masts in a dockyard, and streams of paper prayers are hung

across the valley to prevent the entrance of evil spirits. Chubby little children run out and salute one with a cry of 'Backsheesh !' the first alien word in their infant vocabulary.

A mile further a sudden turn in the valley brings one to a level plain—a phenomenally flat piece of ground where one can race two miles along the straight. No one passes it without remarking that it is the best site for a hill-station in Northern India. Where else can one find a racecourse, polo-ground, fishing, and shooting, and a rainfall that is little more than a third of that of Darjeeling? Three hundred feet above the stream on the west bank is a plateau, apparently intended for building sites. The plain in the valley was naturally designed for the training of mounted infantry, and is now, probably for the first time, being turned to its proper use.

I have left the discomforts of Phari, and am camping now on the Lingmathang Plain. I am writing in a natural cave in the rock. The opening is walled in by a sangar of stones 5 feet high, from which pine-branches support a projecting roof. On fine days the space between the roof and wall is left open, and called the window ; but when it snows, gunny-bags are let down as purdahs, and the den becomes very warm and comfortable. There is a natural hearth, a natural chimney-piece, and a natural chimney that draws excellently. The place is sheltered by high cliffs, and it is very pleasant to look out from this snugness on a wintry landscape, and ground covered deep with snow.

Outside, seventy shaggy Tibetan ponies, rough and unshod, averaging 12.2 hands, are tethered under the

shelter of a rocky cliff. They are being trained according to the most approved methods of modern warfare. The Mounted Infantry Corps, mostly volunteers from the 23rd and 32nd Pioneers and 8th Gurkhas, are under the command of Captain Ottley of the 23rd. The corps was raised at Gnatong in December, and though many of the men had not ridden before, after two months' training they cut a very respectable figure in the saddle. A few years ago a proposal was made to the military authorities that the Pioneers, like other regiments, should go in for a course of mounted infantry training. The reply caused much amusement at the time. The suggestion was not adopted, but orders were issued that 'every available opportunity should be taken of teaching the Pioneers to ride in carts.' A wag in the force naturally suggests that the new Ekka Corps, now running between Phari and Tuna, should be utilised to carry out the spirit of this order. Certainly on the road beyond the Tangla the Ekkas would require some sitting.

The present mission is the third 'show' on which the 23rd and 32nd have been together during the last nine years. In Chitral and Waziristan they fought side by side. It is no exaggeration to say that these regiments have been on active service three years out of five since they were raised in 1857. The original draft of the 32nd, it will be remembered, was the unarmed volunteer corps of Mazbi Sikhs, who offered themselves as an escort to the convoy from Lahore to Delhi during the siege. The Mazbis were the most lawless and refractory folk in the Punjab, and had long been the despair of Government. On arrival at Delhi they were employed in the trenches, rushing in to fill

up the places of the killed and wounded as fast as they fell. It will be remembered that they formed the fatigue party who carried the powder-bags to blow up the Cashmere Gate. A hundred and fifty-seven of them were killed during the siege. With this brilliant opening it is no wonder that they have been on active service almost continually since.

A frontier campaign would be incomplete without the 32nd or 23rd. It was the 32nd who cut their way through 5 feet of snow, and carried the battery guns to the relief of Chitral. The 23rd Pioneers were also raised from the Mazbi Sikhs in the same year of the Mutiny, 1857. The history of the two regiments is very similar. The 23rd distinguished themselves in China, Abyssinia, Afghanistan, and numerous frontier campaigns. One of the most brilliant exploits was when, with the Gordon Highlanders under Major (now Sir George) White, they captured the Afghan guns at Kandahar. To-day the men of the two regiments meet again as members of the same corps on the Lingmathang Plain. Naturally the most cordial relations exist between the men, and one can hear them discussing old campaigns as they sit round their pinewood fires in the evenings. They and the twenty men of the 8th Gurkhas (of Manipur fame) turn out together every morning for exercise on their diminutive steeds. They ride without saddle or stirrups, and though they have only been horsemen for two months, they seldom fall off at the jumps. The other day, when a Mazbi Sikh took a voluntary into the hedge, a genial Gurkha reminded him of the eccentric order 'to practise riding in carts.'

At Lingmathang we have had a fair amount of sport

of a desultory kind. The neighbouring forests are the home of that very rare and little-known animal, the shao, or Sikkim stag. The first animal of the species to fall to a European gun was shot by Major Wallace Dunlop on the Lingmathang Hills in January. A month later Captain Ottley wounded a buck which he was not able to follow up on account of a heavy fall of snow. Lately one or two shao—does in all cases—have come down to visit the plain. While we were breakfasting on the morning of the 16th, we heard a great deal of shouting and halloaing, and a Gurkha jemadar ran up to tell us that a female shao, pursued by village dogs, had broken through the jungle on the hillside and emerged on the plain a hundred yards from our camp. We mounted at once, and Ottley deployed the mounted infantry, who were ready for parade, to head the beast from the hills. The shao jinked like a hare, and crossed and recrossed the stream several times, but the poor beast was exhausted, and, after twenty minutes' exciting chase, we surrounded it. Captain Ottley threw himself on the animal's neck and held it down until a sepoy arrived with ropes to bind its hind-legs. The chase was certainly a unique incident in the history of sport—a field of seventy in the Himalayas, a clear spurt in the open, no dogs, and the quarry the rarest zoological specimen in the world. The beast stood nearly 14 hands, and was remarkable for its long ears and elongated jaw. The sequel was sad. Besides the fright and exhaustion, the captured shao sustained an injury in the loin; it pined, barely nibbled at its food, and, after ten days, died.

Sikkim stags are sometimes shot by native shikaris, and there is great rivalry among members of the mission

force in buying their heads. They are shy, inaccessible beasts, and they are not met with beyond the wood limit.

The shooting in the Chumbi valley is interesting to anyone fond of natural history, though it is a little disappointing from the sportsman's point of view. When officers go out for a day's shooting, they think they have done well if they bring home a brace of pheasants. When the sappers and miners began to work on the road below Gautsa, the blood-pheasants used to come down to the stream to watch the operations, but now one sees very few game-birds in the valley. The minal is occasionally shot. The cock-bird, as all sportsmen know, is, with the exception of the Argus-eye, the most beautiful pheasant in the world. There is a lamasery in the neighbourhood, where the birds are almost tame. The monks who feed them think that they are inhabited by the spirits of the blest. Where the snow melts in the pine-forests and leaves soft patches and moist earth, you will find the blood-pheasant. When you disturb them they will run up the hillside and call vociferously from their new hiding-place, so that you may get another shot. Pheasant-shooting here is not sport ; the birds seldom rise, and when they do it is almost impossible to get a shot at them in the thick jungle. One must shoot them running for the pot. Ten or a dozen is not a bad bag for one gun later in the year, when more snow has fallen.

At a distance the blood-pheasant appears a dowdy bird. The hen is quite insignificant, but, on a closer acquaintance, the cock shows a delicate colour-scheme of mauve, pink and green, which is quite different from

the plumage of any other bird I have seen. The skins fetch a good price at home, as fishermen find them useful for making flies. A sportsman who has shot in the Yatung Valley regularly for four years tells me that the cock-bird of this species is very much more numerous than the hen. Another Chumbi pheasant is the tracopan, a smaller bird than the minal, and very beautifully marked. I have not heard of a tracopan being shot this season ; the bird is not at all common anywhere on this side of the Himalayas.

Snow-partridge sometimes come down to the Lingmathang hills ; in the adjacent Kongbu Valley they are plentiful. These birds are gregarious, and are found among the large, loose boulders on the hill-tops. In appearance they are a cross between the British grouse and the red-legged partridge, having red feet and legs uncovered with feathers, and a red bill and chocolate breast. The feathers of the back and rump are white, with broad, defined bars of rich black.

Another common bird is the snow-pigeon. Large flocks of them may be seen circling about the valley anywhere between Phari and Chumbi. Sometimes, when we are sitting in our cave after dinner, we hear the tweek of solitary snipe flying overhead, but we have never flushed any. Every morning before breakfast I stroll along the river bank with a gun, and often put up a stray duck. I have frequently seen goosanders on the river, but not more than two or three in a party. They never leave the Himalayas. The only migratory duck I have observed are the common teal and Brahminy or ruddy sheldrake, and these only in pairs. The latter, though despised on the plains, are quite edible up here. I discredit the statement that they

feed on carrion, as I have never seen one near the carcasses of the dead transport animals that are only too plentiful in the valley just now. After comparing notes with other sportsmen, I conclude that the Ammo Chu Valley is not a regular route for migratory duck. The odd teal that I shot in February were probably loiterers that were not strong enough to join in the flight southwards.

Near Lingmathang I shot the ibis bill (*Ibidorhynchus Struthersi*), a bird which is allied to the oyster catchers. This was the first Central Asian species I met.

Gautsa, which lies five miles north of Lingmathang, nearly half-way between Chumbi and Phari, must be added to the map. A week or two ago the place was deserted and unnamed; it did not boast a single cowherd's hut. Now it is a busy camp, and likely to be a permanent halting-place on the road to Phari. The camp lies in a deep, moss-carpeted hollow, with no apparent egress. On three sides it is flanked by rocky cliffs, densely forested with pine and silver birch; on the fourth rises an abrupt wall of rock, which is suffused with a glow of amber light an hour before sunset. The Ammo Chu, which is here nothing but a 20-foot stream frozen over at night, bisects the camp. The valley is warm and sheltered, and escapes much of the bitter wind that never spares Chumbi. After dinner one prefers the open-air and a camp fire. Officers who have been up the line before turn into their tents regretfully, for they know that they are saying good-bye to comfort, and will not enjoy the genial warmth of a good fire again until they have crossed the bleak Tibetan tablelands and reached the sparsely-wooded Valley of Gyantse.

2. PHARI JONG

Icy winds and suffocating smoke are not conducive to a literary style, though they sometimes inspire a rude eloquence that is quite unfit for publication. As I write we are huddling over the mess-room brazier—our youngest optimist would not call it a fire. Men drop in now and then from fatigue duty, and utter an incisive phrase that expresses the general feeling, while we who write for an enlightened public must sacrifice force for euphemism. A week at Phari dispels all illusions ; only a bargee could adequately describe the place. Yet the elements, which ‘feelingly persuade us’ what we are, sometimes inspire us with the eloquence of discomfort.

At Gautsa the air was scented with the fragrance of warm pine-trees, and there was no indication of winter save the ice on the Ammo Chu. The torrent roared boisterously beneath its frozen surface, and threw up little tentacles of frozen spray, which glistened fantastically in the sun. Three miles further up the stream the wood-belt ends abruptly ; then, after another three miles, one passes the last stunted bush ; after that there is nothing but brown earth and yellow withered grass.

Five miles above Gautsa is Dotah, the most cheerless camp on the march. The wind blows through the gorge unceasingly, and penetrates to the bone. On the left bank of the stream is the frozen waterfall, which might be worshipped by the fanciful and superstitious as embodying the genius of the place, hard and resistless, a crystallised monument of the implacable spirit of Nature in these high places.

At Kamparab, where we camped, two miles higher up the stream, the thermometer fell to 14° below zero. Close by is the meeting-place of the sources of the Ammo Chu. All the plain is undermined with the warrens of the long-haired marmots and voles, who sit on their thresholds like a thousand little spies, and curiously watch our approach, then dive down into their burrows to tell their wives of the strange bearded invaders. They are the despair of their rivals, the sappers and miners, who are trying to make a level road for the new light ekkas. One envies them their warmth and snugness as one rides against the bitter penetrating winds.

Twelve miles from Gautsa a turn in the valley brings one into view of Phari Jong. At first sight it might be a huge isolated rock, but as one approaches the bastions and battlements become more distinct. Distances are deceptive in this rarefied air, and objects that one imagines to be quite close are sometimes found to be several miles distant.

The fort is built on a natural mound in the plain. It is a huge rambling building six stories high, surrounded by a courtyard, where mules and ponies are stabled. As a military fortification Phari Jong is by no means contemptible. The walls are of massive stonework which would take heavy guns to demolish. The angles are protected from attacking parties by machicolated galleries, and three enormous bastions project from each flank. These are crumbling in places, and the Pioneers might destroy the bastion and breach the wall with a bag or two of guncotton. On the eastern side there is a square courtyard like an Arab caravan-serai, where cattle are penned. The fortress would

hold the whole Tibetan army, with provisions for a year. It was evacuated the night before we reconnoitred the valley.

The interior of the Jong is a warren of stairs, landings, and dark cavernous rooms, which would take a whole day to explore. The walls are built of stone and mud, and coated with century-old smoke. There are no chimneys or adequate windows, and the filth is indescribable. When Phari was first occupied, eighty coolies were employed a whole week clearing away refuse. Judging by the accretion of dirt, a newcomer might class the building as medieval; but filth is no criterion of age, for everything left in the same place becomes quickly coated with grime an inch thick. The dust that invades one's tent at Chumbi is clean and wholesome compared to the Phari dirt, which is the filth of human habitation, the secretion of centuries of foul living. It falls from the roof on one's head, sticks to one's clothes as one brushes against the wall, and is blown up into one's eyes and throat from the floor.

The fort is most insanitary, but a military occupation is necessary. The hacking coughs which are prevalent among officers and men are due to impurities of the air which affect the lungs. Cart-loads of dirt are being scraped away every day, but gusts of wind from the lower stories blow up more dust, which penetrates every nook and cranny of the draughty rooms, so that there is a fresh layer by nightfall. To clear the lower stories and cellars would be a hopeless task; even now rooms are found in unexpected places which emit clouds of dust whenever the wind eddies round the basement.

I explored the ground-floor with a lantern, and was

completely lost in the maze of passages and dark chambers. When we first occupied the fort, they were filled with straw, gunpowder, and old arms. A hundred and forty maunds of inferior gunpowder was destroyed, and the arms now litter the courtyard. These the Tibetans themselves abandoned as rubbish. The rusty helmets, shields, and breastplates are made of the thinnest iron plates interlaced with leathern thongs, and would not stop an arrow. The old bell-mouthed matchlocks, with their wooden ground-rests, would be more dangerous to the Tibetan marksmen than the enemy. The slings and bows and arrows are reckoned obsolete even by these primitive warriors. Perhaps they attribute more efficacy to the praying-wheels which one encounters at every corner of the fort. The largest are in niches in the wall to left and right of the gateway ; rows of smaller ones are attached to the banisters on the landings and to the battlements of the roof. The wheels are covered with grime—the grime of Lamas' hands. Dirt and religion are inseparable in Tibet. The Lamas themselves are the most filthy and malodorous folk I have met in the country. From this it must not be inferred that one class is more cleanly in its habits than another, for nobody ever thinks of washing. Soap is not included in the list of sundries that pass the Customs House at Yatung. If the Lamas are dirtier than the yakherds and itinerant merchants it is because they lead an indoor life, whereas the pastoral folk are continually exposed to the purifying winds of the tablelands, which are the nearest equivalent in Tibet to a cold bath.

I once read of a Tibetan saint, one of the pupils of Naropa, who was credited with a hundred miraculous

gifts, one of which was that he could dive into the water like a fish. Wherein the miracle lay had often puzzled me, but when I met the Lamas of the Kanjut Gompa I understood at once that it was the holy man's contact with the water.

Phari is eloquent of piety, as it is understood in Tibet. The better rooms are frescoed with Buddhistic paintings, and on the third floor is a library, now used as a hospital, where xylograph editions of the Lamaist scriptures and lives of the saints are pigeon-holed in lockers in the wall. The books are printed on thin oblong sheets of Chinese paper, enclosed in boards, and illuminated with quaint coloured tailpieces of holy men in devotional attitudes. Phari fort, with its casual blending of East and West, is full of incongruous effects, but the oddest and most pathetic incongruity is the chorten on the roof, from which, amidst praying-flags and pious offerings of coloured raiment, flutters the Union Jack.

The troops are so busy making roads that they have very little time for amusements. The 8th Gurkhas have already constructed some eight miles of road on each side of Phari for the ekka transport. Companies of the 23rd Pioneers are repairing the road at Dotah, Chumbi, and Rinchengong. The 32nd are working at Richengong, and the sappers and miners on the Nathula and at Gautsa.

We have started football, and the Gurkhas have a very good idea of the game. One loses one's wind completely at this elevation after every spurt of twenty yards, but recovers it again in a wonderfully short time. Other amusements are sliding and tobogganing, which

are a little disappointing to enthusiasts. The ice is lumpy and broken, and the streamlets that run down to the plain are so tortuous that fifty yards without a spill is considered a good run for a toboggan. The funniest sight is to see the Gurkha soldiers trying to drag the toboggan uphill, slipping and tumbling and sprawling on the ice, and immensely enjoying one another's discomfiture.

To clear the dust from one's throat and shake off the depression caused by weeks of waiting in the same place, there is nothing like a day's shooting or exploring in the neighbourhood of Phari. I get up sometimes before daybreak, and spend the whole day reconnoitring with a small party of mounted infantry. Yesterday we crossed a pass which looked down into the Kongbu Valley—a likely camping-ground for the Tibetan troops. The valley is connected to the north with the Tuna plateau, and is almost as fertile in its lower stretches as Chumbi. A gray fortress hangs over the cliff on the western side of the valley, and above it tower the glaciers of Shudu-Tsenpa and the Gora Pass into Sikkim. On the eastern side, at a creditable distance from the fort, we could see the Kongbu nunnery, which looked from where we stood like an old Roman viaduct. The nuns, I was told, are rarely celibate; they shave the head and wear no ornaments.

Riding back we saw some burrhel on the opposite hills, too far off to make a successful stalk possible. The valley is full of them, and a week later some officers from Phari on a yak-collecting expedition got several good heads. The Tibetan gazelle, or goa (*Gazella hirticaudata*), is very common on the Phari plateau, and we bagged two that afternoon. When the force first

occupied the Jong, they were so tame that a sportsman could walk up to within 100 yards of a herd, and it was not an uncommon thing for three buck to fall to the same gun in a morning. Now one has to manœuvre a great deal to get within 300 yards of them.

Sportsmen who have travelled in other parts of Tibet say the goa are very shy and inaccessible. Perhaps their comparative tameness near Phari may be accounted for by the fact that the old trade route crosses the plateau, and they have never been molested by the itinerant merchants and carriers. Gazelle meat is excellent. It has been a great resource for the garrison. No epicure could wish for anything better.

Another unfamiliar beast that one meets in the neighbourhood of Phari is the kyang, or Tibetan wild ass (*Equus hemionus*), one or two of which have been shot for specimens. The kyang is more like a zebra than a horse or donkey. Its flesh, I believe, is scorned even by camp-followers. Hare are fairly plentiful, but they are quite flavourless. A huge solitary gray wolf (*Canis laniger*) was shot the other day, the only one of its kind I have seen. Occasionally one puts up a fox. The Tibetan species has a very fine brush that fetches a fancy price in the bazaar. At present there is too much ice on the plain to hunt them, but they ought to give good sport in the spring.

It was dark when we rode into the Jong. After a long day in the saddle, dinner is good, even though it is of yak's flesh, and it is good to sit in front of a fire even though the smoke chokes you. I went so far as to pity the cave-dwellers at Chumbi. Phari is certainly very much colder, but it has its diversions and

interests. There is still some shooting to be had, and the place has a quaint old-world individuality of its own, which seasons the monotony of life to a contemplative man. One is on the borderland, and one has a Micawber-like feeling that something may turn up. After dinner there is bridge, which fleets the time considerably, but at Chumbi there were no diversions of any kind—nothing but dull, blank, uninterrupted monotony.

For two days half a blizzard has been blowing, and expeditions have been impossible. Everything one eats and drinks has the same taste of argol smoke. At breakfast this morning we had to put our *chapatties* in our pockets to keep them clean, and kept our meat covered with a soup-plate, making surreptitious dives at it with a fork. After a few seconds' exposure it was covered with grime. Sausages and bully beef, which had just been boiled, were found to be frozen inside. The smoke in the mess-room was suffocating. So to bed, wrapped in sheepskins and a sleeping-bag. Under these depressing conditions I have been reading the narratives of Bogle and Manning, old English worthies who have left on record the most vivid impressions of the dirt and cold and misery of Phari.

It is ninety years since Thomas Manning passed through Phari on his way to Lhasa. Previously to his visit we only know of two Englishmen who have set foot in Phari—Bogle in 1774, and Turner in 1783, both emissaries of Warren Hastings. Manning's journal is mostly taken up with complaints of his Chinese servant, who seems to have gained some mysterious ascendancy over him, and to have exercised it most unhandsomely.

As a traveller Manning had a genius for missing effects ; it is characteristic of him that he spent sixteen days at Phari, yet except for a casual footnote, evidently inserted in his journal after his return, he makes no mention of the Jong. Were it not for Bogle's account of thirty years before, we might conclude that the building was not then in existence.

On October 21, 1811, Manning writes in his diary : ' We arrived at Phari Jong. Frost. Frost also two days before. I was lodged in a strange place, but so were the natives.' On the 27th he summarised his impressions of Phari : ' Dirt, dirt, grease, smoke, misery, but good mutton.'

Manning's journal is expressive, if monosyllabic. He was of the class of subjective travellers, who visit the ends of the earth to record their own personal discomforts. Sensitive, neurotic, ever on the look-out for slights, he could not have been a happy vagabond. A dozen lines record the impressions of his first week at Phari. He was cheated ; he was treated civilly ; he slighted the magistrates, mistaking them for idle fellows ; he was turned out of his room to make way for Chinese soldiers ; he quarrelled with his servant. A single extract portrays the man to the life, as if he were sitting dejectedly by his yak-dung fire at this hour brooding over his wrongs :

" " The Chinaman was cross again." Says I, " Was that a bird at the magistrate's that flapped so loud ? " Answer : " What signifies whether it was a bird or not ? " Where he sat I thought he might see ; and I was curious to know if such large birds frequented the *building*. These are the answers I get. He is always discontented and grumbling, and takes no trouble off

my hands. Being younger, and, like all Asiatics, able to stoop and crouch without pain or difficulty, he might assist me in many things without trouble to himself. A younger brother or any English young gentleman would in his place of course lay the cloth and do other little services when I am tired; but he does not seem to have much of the generous about him, nor does he in any way serve me, or behave to me with any show of affection or good-will: consequently I grow no more attached to him than the first day I saw him. I could not have thought it possible for me to have lived so long with anyone without either disliking him or caring sixpence for him. He has good qualities, too. The strangeness of his situation may partly excuse him. (I am more attached to my guide, with all his faults, who has been with me but a few days.) My guide has behaved so damnably ill since I wrote that, that I wish it had not come into my mind.'

I give the extract at length, not only as an illuminating portrait of Manning, but as an incidental proof that he visited the Jong, and that it was very much the same building then as it is to-day. But had it not been for the flapping of the bird which occasioned the quarrel with his Chinese servant, Manning would have left Phari without a reference to the wonderful old fortress which is the most romantic feature on the road from India to Gyantse. Appended to the journal is this footnote to the word *building*, which I have italicized in the extract: 'The building is immensely large, six or more stories high, a sort of fortress. At a distance it appears to be all Phari Jong. Indeed, most of it consists of miserable galleries and holes.'

Members of the mission force who have visited Phari will no doubt attribute Manning's evident ill-humour and depression during his stay there to the environments of the place, which have not changed much in the last ninety years. But his spirits improved as he continued his journey to Gyantse and Lhasa, and he reveals himself the kindly, eccentric, and affectionate soul who was the friend and intimate of Charles Lamb.

Bogle arrived at Phari on October 23, 1774. He and Turner and Manning all entered Tibet through Bhutan. 'As we advanced,' he wrote in his journal, 'we came in sight of the castle of Phari Jong, which cuts a good figure from without. It rises into several towers with the balconies, and, having few windows, has the look of strength ; it is surrounded by the town.' The only other reference he makes to the Jong shows us that the fortress was in bad repair so long ago as 1774. 'The two Lhasa officers who have the government of Phari Jong sent me some butter, tea, etc., the day after my arrival ; and letting me know that they expected a visit from me, I went. The inside of the castle did not answer the notion I had formed of it. The stairs are ladders worn to the bone, and the rooms are little better than garrets.'

The origin of the fort is unknown. Some of the inhabitants of Phari say that it was built more than a hundred years ago, when the Nepalese were over-running Sikkim. But this is obviously incorrect, as the Tibetan-Nepalese War, in which the Chinese drove the Ghurkhas out of Tibet, and defeated their army within a day's march of Khatmandu, took place in 1788-1792, whereas Bogle's description of the Jong

was written fourteen years earlier. A more general impression is that centuries ago orders came from Lhasa to collect stones on the hillsides, and the building was constructed by forced labour in a few months. That is a tale of endurance and suffering that might very likely be passed from father to son for generations.

Bogle's description of the town might have been written by an officer of the garrison to-day, only he wrote from the inmate's point of view. He noticed the houses 'so huddled together that one may chance to overlook them,' and the flat roofs covered with bundles of straw. He knocked his head against the low ceilings, and ran against the pillars that supported the beams. 'In the middle of the roof,' he wrote, 'is a hole to let out smoke, which, however, departs not without making the whole room as black as a chimney. The opening serves also to let in the light; the doors are full of holes and crevices, through which the women and children keep peeping.' Needless to say nothing has changed in the last hundred and thirty years, unless it is that the women are bolder. I looked down from the roof this morning on Phari town, lying like a rabbit-warren beneath the fort. All one can see from the battlement are the flat roofs of low black houses, from which smoke issues in dense fumes. The roofs are stacked with straw, and connected by a web of coloured praying-flags running from house to house, and sometimes over the narrow alleys that serve as streets. Enormous fat ravens perch on the wall, and innumerable flocks of twittering sparrows. For warmth's sake most of the rooms are underground, and in these subterranean dens Tibetans, black as coal-heavers,

huddle together with yaks and mules. Tibetan women, equally dirty, go about, their faces smeared and blotched with caoutchouc, wearing a red, hoop-like head-dress, ornamented with alternate turquoises and ruby-coloured stones.

In the fort the first thing one meets of a morning is a troop of these grimy sirens, climbing the stairs, burdened with buckets of chopped ice and sacks of yak-dung, the two necessities of life. The Tibetan coolie women are merry folk ; they laugh and chatter over their work all day long, and do not in the least resist the familiarities of the Gurkha soldiers. Sometimes as they pass one they giggle coyly, and put out the tongue, which is their way of showing respect to those in high places ; but when one hears their laughter echoing down the stairs it is difficult to believe that it is not intended for saucy impudence. Their merriment sounds unnatural in all this filth and cold and discomfort. Certainly if Bogle returned to Phari he would find the women very much bolder, though, I am afraid, not any cleaner. Could he see the Englishmen in Phari to-day, he might not recognise his compatriots.

Often in civilised places I shall think of the group at Phari in the mess-room after dinner—a group of ruffianly-looking bandits in a blackened, smut-begrimed room, clad in wool and fur from head to foot, bearded like wild men of the woods, and sitting round a yak-dung fire, drinking rum. After a week at Phari the best-groomed man might qualify for a caricature of Bill Sikes. Perhaps one day in Piccadilly one may encounter a half-remembered face, and something familiar in walk or gait may reveal an old friend of the

Jong. Then in ' Jimmy's,' memories of argol-smoke and frozen moustaches will give a zest to a bottle of beaune or chablis, which one had almost forgotten was once dreamed of among the unattainable luxuries of life.

VII

ROBERT FALCON SCOTT

I. AT CAPE EVANS

' October, 1911.—I don't know what to think of Amundsen's chances. If he gets to the Pole, it must be before we do, as he is bound to travel fast with dogs and pretty certain to start early. On this account I decided at a very early date to act exactly as I should have done had he not existed. Any attempt to race must have wrecked my plan, besides which it doesn't appear the sort of thing one is out for.

' Possibly you will have heard something before this reaches you. Oh! and there are all sorts of possibilities. In any case you can rely on my not doing or saying anything foolish—only I'm afraid you must be prepared for the chance of finding our venture much belittled.

' After all, it is the work that counts, not the applause that follows.

' Words must always fail me when I talk of Bill Wilson. I believe he really is the finest character I ever met—the closer one gets to him the more there is to admire. Every quality is so solid and dependable; cannot you imagine how that counts down here? Whatever the matter, one knows Bill will be sound, shrewdly practical, intensely loyal and quite unselfish. Add to this a wider knowledge of persons and things than is at first guessable, a quiet vein of humour and

really consummate tact, and you have some idea of his values. I think he is the most popular member of the party, and that is saying much.

' Bowers is all and more than I ever expected of him. He is a positive treasure, absolutely trustworthy and prodigiously energetic. He is about the hardest man amongst us, and that is saying a good deal—nothing seems to hurt his tough little body and certainly no hardship daunts his spirit. I shall have a hundred little tales to tell you of his indefatigable zeal, his unselfishness, and his inextinguishable good humour. He surprises always, for his intelligence is of quite a high order and his memory for details most exceptional. You can imagine him, as he is, an indispensable assistant to me in every detail concerning the management and organisation of our sledging work and a delightful companion on the march.

' One of the greatest successes is Wright. He is very thorough and absolutely ready for anything. Like Bowers he has taken to sledging like a duck to water, and although he hasn't had such severe testing, I believe he would stand it pretty nearly as well. Nothing ever seems to worry him, and I can't imagine he ever complained of anything in his life.

' I don't think I will give such long descriptions of the others, though most of them deserve equally high praise. Taken all round they are a perfectly excellent lot.

' The Soldier is very popular with all—a delightfully humorous cheery old pessimist—striving with the ponies night and day and bringing woeful accounts of their small ailments into the hut.



CAPTAIN SCOTT

' X. . . . has a positive passion for helping others—it is extraordinary what pains he will take to do a kind thing unobtrusively.

' One sees the need of having one's heart in one's work. Results can only be got down here by a man desperately eager to get them.

' Y. . . . works hard at his own work, taking extraordinary pains with it, but with an astonishing lack of initiative he makes not the smallest effort to grasp the work of others ; it is a sort of character which plants itself in a corner and *will* stop there.

' The men are equally fine. Edgar Evans has proved a useful member of our party ; he looks after our sledges and sledge equipment with a care of management and a fertility of resource which is truly astonishing—on " trek " he is just as sound and hard as ever and has an inexhaustible store of anecdote.

' Crean is perfectly happy, ready to do anything and go anywhere, the harder the work, the better. Evans and Crean are great friends. Lashly is his old self in every respect, hard working to the limit, quiet, abstemious, and determined. You see altogether I have a good set of people with me, and it will go hard if we don't achieve something.

' The study of individual character is a pleasant pastime in such a mixed community of thoroughly nice people, and the study of relationships and interactions is fascinating—men of the most diverse upbringing and experience are really pals with one another, and the

subjects which would be delicate ground of discussion between acquaintances are just those which are most freely used for jest. For instance, the Soldier is never tired of girding at Australia, its people and institutions, and the Australians retaliate by attacking the hide-bound prejudices of the British army. I have never seen a temper lost in these discussions. So as I sit here I am very satisfied with these things. I think that it would have been difficult to better the organisation of the party—every man has his work and is especially adapted for it; there is no gap and no overlap—it is all that I desired, and the same might be said of the men selected to do the work.'

* * * * *

2. FORESTALLED

Camp 67. Lunch obs. : Lat. $89^{\circ} 26' 57''$; Lat. dead reckoning, $89^{\circ} 33' 15''$ S. ; Long. $160^{\circ} 56' 45''$ E. ; Var. 179° E.

It is wonderful to think that two long marches would land us at the Pole. We left our depôt to-day with nine days' provisions, so that it ought to be a certain thing now, and the only appalling possibility the sight of the Norwegian flag forestalling ours. Little Bowers continues his indefatigable efforts to get good sights, and it is wonderful how he works them up in his sleeping-bag in our congested tent. (Minimum for night – 27.5° .) Only 27 miles from the Pole. We *ought* to do it now.

Tuesday, January 16.—Camp 68. Height 9760. T. -23.5° . The worst has happened, or nearly the worst. We marched well in the morning and covered $7\frac{1}{2}$ miles. Noon sight showed us in Lat. $89^{\circ} 42'$ S., and we started

off in high spirits in the afternoon, feeling that tomorrow would see us at our destination. About the second hour of the march Bowers' sharp eyes detected what he thought was a cairn ; he was uneasy about it, but argued that it must be a sastrugus. Half an hour later he detected a black speck ahead. Soon we knew that this could not be a natural snow feature. We marched on, found that it was a black flag tied to a sledge bearer ; near by the remains of a camp ; sledge tracks and ski tracks going and coming and the clear trace of dogs' paws—many dogs. This told us the whole story. The Norwegians have forestalled us and are first at the Pole. It is a terrible disappointment, and I am very sorry for my loyal companions. Many thoughts come and much discussion have we had. Tomorrow we must march on to the Pole and then hasten home with all the speed we can compass. All the day dreams must go ; it will be a wearisome return. Certainly we are descending in altitude—certainly also the Norwegians found an easy way up.

Wednesday, January 17.—Camp 69. T. -22° at start. Night -21° . The Pole. Yes, but under very different circumstances from those expected. We have had a horrible day—add to our disappointment a head wind 4 to 5, with a temperature -22° , and companions labouring on with cold feet and hands.

We started at 7.30, none of us having slept much after the shock of our discovery. We followed the Norwegian sledge tracks for some way ; as far as we make out there are only two men. In about three miles we passed two small cairns. Then the weather overcast, and the tracks being increasingly drifted up and obviously going too far to the west, we decided to

make straight for the Pole according to our calculations. At 12.30 Evans had such cold hands we camped for lunch—an excellent ‘ week-end one.’ We had marched 7.4 miles. Lat. sight gave $89^{\circ} 53' 37''$. We started out and did $6\frac{1}{2}$ miles due south. To-night little Bowers is laying himself out to get sights in terrible difficult circumstances ; the wind is blowing hard, T. -21° , and there is that curious damp, cold feeling in the air which chills one to the bone in no time. We have been descending again, I think, but there looks to be a rise ahead ; otherwise there is very little that is different from the awful monotony of past days. Great God ! this is an awful place and terrible enough for us to have laboured to it without the reward of priority. Well, it is something to have got here, and the wind may be our friend to-morrow. We have had a fat Polar hoosh in spite of our chagrin, and feel comfortable inside—added a small stick of chocolate and the queer taste of a cigarette brought by Wilson. Now for the run home and a desperate struggle. I wonder if we can do it.

* * * *

3. THE LAST MARCH

Friday, March 2.—Lunch. Misfortunes rarely come singly. We marched to the [Middle Barrier] depôt fairly easily yesterday afternoon, and since that have suffered three distinct blows which have placed us in a bad position. First we found a shortage of oil ; with most rigid economy it can scarce carry us to the next depôt on this surface [71 miles away]. Second, Titus Oates disclosed his feet, the toes showing very bad

indeed, evidently bitten by the late temperatures. The third blow came in the night, when the wind, which we had hailed with some joy, brought dark overcast weather. It fell below -40° in the night, and this morning it took $1\frac{1}{2}$ hours to get our foot gear on, but we got away before eight. We lost cairn and tracks together and made as steady as we could N. by W., but have seen nothing. Worse was to come—the surface is simply awful. In spite of strong wind and full sail we have only done $5\frac{1}{2}$ miles. We are in a *very* queer street since there is no doubt we cannot do the extra marches and feel the cold horribly.

Saturday, March 3.—Lunch. We picked up the track again yesterday, finding ourselves to the eastward. Did close on 10 miles and things looked a trifle better; but this morning the outlook is blacker than ever. Started well and with good breeze; for an hour made good headway; then the surface grew awful beyond words. The wind drew forward; every circumstance was against us. After $4\frac{1}{4}$ hours things so bad that we camped, having covered $4\frac{1}{2}$ miles. [R. 46.] One cannot consider this a fault of our own—certainly we were pulling hard this morning—it was more than three parts surface which held us back—the wind at strongest, powerless to move the sledge. When the light is good it is easy to see the reason. The surface, lately a very good hard one, is coated with a thin layer of woolly crystals, formed by radiation no doubt. These are too firmly fixed to be removed by the wind and cause impossible friction on the runners. God help us, we can't keep up this pulling, that is certain. Amongst ourselves we are unendingly cheerful, but what each man feels in his heart I can only guess. Putting on foot

gear in the morning is getting slower and slower, therefore every day more dangerous.

Sunday, March 4.—Lunch. Things looking *very* black indeed. As usual we forgot our trouble last night, got into our bags, slept splendidly on good hoosh, woke and had another, and started marching. Sun shining brightly, tracks clear, but surface covered with sandy frost-rime. All the morning we had to pull with all our strength, and in $4\frac{1}{2}$ hours we covered $3\frac{1}{2}$ miles. Last night it was overcast and thick, surface bad; this morning sun shining and surface as bad as ever. One has little to hope for except perhaps strong dry wind—an unlikely contingency at this time of year. Under the immediate surface crystals is a hard sastrugi surface, which must have been excellent for pulling a week or two ago. We are about 42 miles from the next *dépôt* and have a week's food, but only about 3 to 4 days' fuel—we are as economical of the latter as one can possibly be, and we cannot afford to save food and pull as we are pulling. We are in a very tight place indeed, but none of us despondent *yet*, or at least we preserve every semblance of good cheer, but one's heart sinks as the sledge stops dead at some sastrugi behind which the surface sand lies thickly heaped. For the moment the temperature is on the -20° —an improvement which makes us much more comfortable, but a colder snap is bound to come again soon. I fear that Oates at least will weather such an event very poorly. Providence to our aid! We can expect little from man now except the possibility of extra food at the next *dépôt*. It will be real bad if we get there and find the same shortage of oil. Shall we get there? Such a short distance it would have appeared to us on the summit! I don't know

what I should do if Wilson and Bowers weren't so determinedly cheerful over things.

Monday, March 5.—Lunch. Regret to say going from bad to worse. We got a slant of wind yesterday afternoon, and going on 5 hours we converted our wretched morning run of $3\frac{1}{2}$ miles into something over 9. We went to bed on a cup of cocoa and pemmican solid with the chill off. (R. 47.) The result is telling on all, but mainly on Oates, whose feet are in a wretched condition. One swelled up tremendously last night and he is very lame this morning. We started march on tea and pemmican as last night—we pretend to prefer the pemmican this way. Marched for 5 hours this morning over a slightly better surface covered with high moundy sastrugi. Sledge capsized twice; we pulled on foot, covering about $5\frac{1}{2}$ miles. We are two pony marches and 4 miles about from our depôt. Our fuel dreadfully low and the poor Soldier nearly done. It is pathetic enough because we can do nothing for him; more hot food might do a little, but only a little, I fear. We none of us expected these terribly low temperatures, and of the rest of us Wilson is feeling them most; mainly, I fear, from his self-sacrificing devotion in doctoring Oates' feet. We cannot help each other, each has enough to do to take care of himself. We get cold on the march when the trudging is heavy, and the wind pierces our warm garments. The others, all of them, are unendingly cheerful when in the tent. We mean to see the game through with a proper spirit, but it's tough work to be pulling harder than we ever pulled in our lives for long hours, and to feel that the progress is so slow. One can only say 'God help us!' and plod on our weary way, cold and very miserable, though out-

wardly cheerful. We talk of all sorts of subjects in the tent, not much of food now, since we decided to take the risk of running a full ration. We simply couldn't go hungry at this time.

Tuesday, March 6.—Lunch. We did a little better with help of wind yesterday afternoon, finishing $9\frac{1}{2}$ miles for the day, and 27 miles from depôt. [R. 48.] But this morning things have been awful. It was warm in the night and for the first time during the journey I overslept myself by more than an hour ; then we were slow with foot gear ; then, pulling with all our might (for our lives) we could scarcely advance at rate of a mile an hour ; then it grew thick and three times we had to get out of harness to search for tracks. The result is something less than $3\frac{1}{2}$ miles for the forenoon. The sun is shining now and the wind gone. Poor Oates is unable to pull, sits on the sledge when we are track-searching—he is wonderfully plucky, as his feet must be giving him great pain. He makes no complaint, but his spirits only come up in spurts now, and he grows more silent in the tent. We are making a spirit lamp to try and replace the primus when our oil is exhausted. It will be a very poor substitute and we've not got much spirit. If we could have kept up our 9-mile days we might have got within reasonable distance of the depôt before running out, but nothing but a strong wind and good surface can help us now, and though we had quite a good breeze this morning, the sledge came as heavy as lead. If we were all fit I should have hopes of getting through, but the poor Soldier has become a terrible hindrance, though he does his utmost and suffers much I fear.

Wednesday, March 7.—A little worse I fear. One of

Oates' feet *very* bad this morning ; he is wonderfully brave. We still talk of what we will do together at home.

We only made $6\frac{1}{2}$ miles yesterday. [R. 49.] This morning in $4\frac{1}{2}$ hours we did just over 4 miles. We are 16 from our depôt. If we only find the correct proportion of food there and this surface continues, we may get to the next depôt [Mt. Hooper, 72 miles farther] but not to One Ton Camp. We hope against hope that the dogs have been to Mt. Hooper ; then we might pull through. If there is a shortage of oil again we can have little hope. One feels that for poor Oates the crisis is near, but none of us are improving, though we are wonderfully fit considering the really excessive work we are doing. We are only kept going by good food. No wind this morning till a chill northerly air came ahead. Sun bright and cairns showing up well. I should like to keep the track to the end.

Thursday, March 8.—Lunch. Worse and worse in morning ; poor Oates' left foot can never last out, and time over foot gear something awful. Have to wait in night foot gear for nearly an hour before I start changing, and then am generally first to be ready. Wilson's feet giving trouble now, but this mainly because he gives so much help to others. We did $4\frac{1}{2}$ miles this morning and are now $8\frac{1}{2}$ miles from the depôt—a ridiculously small distance to feel in difficulties, yet on this surface we know we cannot equal half our old marches, and that for that effort we expend nearly double the energy. The great question is, What shall we find at the depôt ? If the dogs have visited it we may get along a good distance, but if there is another short allowance of fuel, God help us indeed. We are in a very bad way, I fear, in any case.

Saturday, March 10.—Things steadily downhill. Oates' foot worse. He has rare pluck and must know that he can never get through. He asked Wilson if he had a chance this morning, and of course Bill had to say he didn't know. In point of fact he has none. Apart from him, if he went under now, I doubt whether we could get through. With great care we might have a dog's chance, but no more. The weather conditions are awful, and our gear gets steadily more icy and difficult to manage. At the same time of course poor Titus is the greatest handicap. He keeps us waiting in the morning until we have partly lost the warming effect of our good breakfast, when the only wise policy is to be up and away at once ; again at lunch. Poor chap ! it is too pathetic to watch him ; one cannot but try to cheer him up.

Yesterday we marched up the depôt, Mt. Hooper. Cold comfort. Shortage on our allowance all round. I don't know that anyone is to blame. The dogs which would have been our salvation have evidently failed.¹ Meares had a bad trip home I suppose.

This morning it was calm when we breakfasted, but the wind came from the W.N.W. as we broke camp.

¹ For the last six days the dogs had been waiting at One Ton Camp under Cherry-Garrard and Demetri. The supporting party had come out as arranged on the chance of hurrying the Pole travellers back over the last stages of their journey in time to catch the ship. Scott had dated his probable return to Hut Point anywhere between mid-March and early April. Calculating from the speed of the other return parties, Dr. Atkinson looked for him to reach One Ton Camp between March 3 and 10. Here Cherry-Garrard met four days of blizzard ; then there remained little more than enough dog food to bring the teams home. He could either push south one more march and back, at imminent risk of missing Scott on the way, or stay two days at the Camp where Scott was bound to come, if he came at all. His decision to stay at the camp as long as possible was undoubtedly the right one.

It rapidly grew in strength. After travelling for half an hour I saw that none of us could go on facing such conditions. We were forced to camp and are spending the rest of the day in a comfortless blizzard camp, wind quite foul. [R. 52.]

Sunday, March 11.—Titus Oates is very near the end, one feels. What we or he will do, God only knows. We discussed the matter after breakfast ; he is a brave fine fellow and understands the situation, but he practically asked for advice. Nothing could be said but to urge him to march as long as he could. One satisfactory result to the discussion ; I practically ordered Wilson to hand over the means of ending our troubles to us, so that any one of us may know how to do so. Wilson had no choice between doing so and our ransacking the medicine case. We have 30 opium tabloids apiece and he is left with a tube of morphine. So far the tragical side of our story. [R. 53.]

The sky completely overcast when we started this morning. We could see nothing, lost the tracks, and doubtless have been swaying a good deal since—3.1 miles for the forenoon—terribly heavy dragging—expected it. Know that 6 miles is about the limit of our endurance now, if we get no help from wind or surfaces. We have 7 days' food and should be about 55 miles from One Ton Camp to-night, $6 \times 7 = 42$, leaving us 13 miles short of our distance, even if things get no worse. Meanwhile the season rapidly advances.

Monday, March 12.—We did 6.9 miles yesterday, under our necessary average. Things are left much the same, Oates not pulling much, and now with hands as well as feet pretty well useless. We did 4 miles this morning in 4 hours 20 min.—we may hope for 3 this

afternoon, $7 \times 6 = 42$. We shall be 47 miles from the depôt. I doubt if we can possibly do it. The surface remains awful, the cold intense, and our physical condition running down. God help us! Not a breath of favourable wind for more than a week, and apparently liable to head winds at any moment.

Wednesday, March 14.—No doubt about the going downhill, but everything going wrong for us. Yesterday we woke to a strong northerly wind with temp. -37° . Couldn't face it, so remained in camp [R. 54] till 2, then did $5\frac{1}{4}$ miles. Wanted to march later, but party feeling the cold badly as the breeze (N.) never took off entirely, and as the sun sank the temp. fell. Long time getting supper in dark. [R. 55.]

This morning started with southerly breeze, set sail and passed another cairn at good speed; half-way, however, the wind shifted to W. by S. or W.S.W., blew through our wind clothes and into our mits. Poor Wilson horribly cold, could [not] get off ski for some time. Bowers and I practically made camp, and when we got into the tent at last we were all deadly cold. Then temp. now midday down -43° and the wind strong. We *must* go on, but now the making of every camp must be more difficult and dangerous. It must be near the end, but a pretty merciful end. Poor Oates got it again in the foot. I shudder to think what it will be like to-morrow. It is only with greatest pains rest of us keep off frostbites. No idea there could be temperatures like this at this time of year with such winds. Truly awful outside the tent. Must fight it out to the last biscuit, but can't reduce rations.

Friday, March 16 or Saturday 17.—Lost track of dates, but think the last correct. Tragedy all along the

line. At lunch, the day before yesterday, poor Titus Oates said he couldn't go on ; he proposed we should leave him in his sleeping-bag. That we could not do, and we induced him to come on, on the afternoon march. In spite of its awful nature for him he struggled on and we made a few miles. At night he was worse and we knew the end had come.

Should this be found I want these facts recorded. Oates' last thoughts were of his Mother, but immediately before he took pride in thinking that his regiment would be pleased with the bold way in which he met his death. We can testify to his bravery. He has borne intense suffering for weeks without complaint, and to the very last was able and willing to discuss outside subjects. He did not—would not—give up hope till the very end. He was a brave soul. This was the end. He slept through the night before last, hoping not to wake ; but he woke in the morning—yesterday. It was blowing a blizzard. He said, ' I am just going outside and may be some time.' He went out into the blizzard and we have not seen him since.

I take this opportunity of saying that we have stuck to our sick companions to the last. In case of Edgar Evans, when absolutely out of food and he lay insensible, the safety of the remainder seemed to demand his abandonment, but Providence mercifully removed him at this critical moment. He died a natural death, and we did not leave him till two hours after his death. We knew that poor Oates was walking to his death, but though we tried to dissuade him, we knew it was the act of a brave man and an English gentleman. We all hope to meet the end with a similar spirit, and assuredly the end is not far.

I can only write at lunch and then only occasionally. The cold is intense, -40° at midday. My companions are unendingly cheerful, but we are all on the verge of serious frostbites, and though we constantly talk of fetching through I don't think any one of us believes it in his heart.

We are cold on the march now, and at all times except meals. Yesterday we had to lay up for a blizzard and to-day we move dreadfully slowly. We are at No. 14 pony camp, only two pony marches from One Ton Dépôt. We leave here our theodolite, a camera, and Oates' sleeping-bags. Diaries, etc., and geological specimens carried at Wilson's special request, will be found with us or on our sledge.

Sunday, March 18.—To-day, lunch, we are 21 miles from the dépôt. Ill fortune presses, but better may come. We have had more wind and drift from ahead yesterday ; had to stop marching ; wind N.W., force 4, temp. -35° . No human being could face it, and we are worn out *nearly*.

My right foot has gone, nearly all the toes—two days ago I was proud possessor of best feet. These are the steps of my downfall. Like an ass I mixed a small spoonful of curry powder with my melted pemmican—it gave me violent indigestion. I lay awake and in pain all night ; woke and felt done on the march ; foot went and I didn't know it. A very small measure of neglect and have a foot which is not pleasant to contemplate. Bowers takes first place in condition, but there is not much to choose after all. The others are still confident of getting through—or pretend to be—I don't know ! We have the last *half* fill of oil in our primus and a very small quantity of spirit—this alone between us and

thirst. The wind is fair for the moment, and that is perhaps a fact to help. The mileage would have seemed ridiculously small on our outward journey.

Monday, March 19.—Lunch. We camped with difficulty last night, and were dreadfully cold till after our supper of cold pemmican and biscuit and a half a pannikin of cocoa cooked over the spirit. Then, contrary to expectation, we got warm and all slept well. To-day we started in the usual dragging manner. Sledge dreadfully heavy. We are $15\frac{1}{2}$ miles from the depôt and ought to get there in three days. What progress! We have two days' food but barely a day's fuel. All our feet are getting bad—Wilson's best, my right foot worst, left all right. There is no chance to nurse one's feet till we can get hot food into us. Amputation is the least I can hope for now, but will the trouble spread? That is the serious question. The weather doesn't give us a chance—the wind from N. to N.W. and -40° temp. to-day.

Wednesday, March 21.—Got within 11 miles of depôt Monday night ;¹ had to lay up all yesterday in severe blizzard. To-day forlorn hope, Wilson and Bowers going to depôt for fuel.

Thursday, March 22 and 23.—Blizzard bad as ever—Wilson and Bowers unable to start—to-morrow last chance—no fuel and only one or two of food left—must be near the end. Have decided it shall be natural—we shall march for the depôt with or without our effects and die in our tracks.

Thursday, March 29.—Since the 21st we have had a continuous gale from W.S.W. and S.W. We had fuel to make two cups of tea apiece and bare food for two

¹ The 60th camp from the Pole.

days on the 20th. Every day we have been ready to start for our dépôt *11 miles* away, but outside the door of the tent it remains a scene of whirling drift. I do not think we can hope for any better things now. We shall stick it out to the end, but we are getting weaker, of course, and the end cannot be far.

It seems a pity, but I do not think I can write more.

R. SCOTT.

Last entry.

For God's sake look after our people.

EPILOGUE

FROM CAPTAIN SCOTT'S LAST MESSAGE

'We are weak, writing is difficult, but for my own sake I do not regret this journey, which has shown that Englishmen can endure hardships, help one another, and meet death with as great a fortitude as ever in the past. We took risks, we knew we took them ; things have come out against us, and therefore we have no cause for complaint, but bow to the will of Providence, determined still to do our best to the last.'

NOTES

CHARLES ROBERT DARWIN, the discoverer of *natural selection*, was born at Shrewsbury on the 12th of February, 1809. His father and grandfather were scientists of some eminence in their day and his mother was a daughter of the famous Josiah Wedgewood. After five years at the local grammar school he went up to Edinburgh University, (1825-1827), to study medicine, and then in 1828, with a view to take orders, to Christ's College, Cambridge. Professor Henslow, the botanist, encouraged him to form an interest in zoology, and also in geology. At Edinburgh he had already read papers on scientific subjects, and the true bent of his genius now became manifest. After his B.A. in 1831, he was recommended by Prof. Henslow as naturalist to H.M.S. *Beagle*, then about to start for a scientific survey of South American waters. He sailed on Dec. 27, 1831, and did not return till October 2, 1836. Meanwhile he visited Teneriffe, the Cape Verde Islands, Brazil, Monte Video, Tierra del Fuego, Buenos Aires, Valparaiso, Chili, the Galapagos, Tahiti, New Zealand, Tasmania and the Keeling Islands, in which last he started his famous theory of coral reefs. It was during this long expedition that he obtained that intimate knowledge of the animals, vegetation and soil of many countries which so admirably equipped him for the great task he was to perform.

By 1846 he had published several works on zoology and geology, based on his observations during the voyage, and these placed him at once in the front rank of scientists. From 1842 he passed his time at Down, Kent, as a country gentleman among his garden, conservatories, pigeons and fowls. The practical knowledge thus gained (especially about variation and interbreeding) was invaluable.

In spite of continuous ill-health he devoted himself to science with an ever-increasing interest. Here he worked out the great task of his life—the Origin of Species. By 1844 he had worked out for himself a set of conclusions for his own use. These embodied in an undeveloped state the fundamental points in the principle of natural selection, the germ of the Darwinian theory.

Darwin was temperamentally cautious, and but for a curious accident his theory would not have been published for some time to come. But in 1858 Dr. Alfred Russel Wallace, (see note), sent home from the Malay Archipelago a memoir addressed to Darwin. To his surprise, he found this contained in essence the main idea of his own theory of natural selection. On July 1, 1858, Darwin read a letter of his own and the memoir of Wallace simultaneously before the Linnean Society. Now Darwin set himself to the work of condensing

his vast mass of notes—the result was the publication in 1859 of *The Origin of Species by means of Natural Selection*. This was an epoch-making work, and raised an endless controversy all over Europe.

A series of books on kindred subjects now followed, till his sudden death on the 19th April, 1882.

It is as the great leader of evolutionary biology that Darwin will be mainly remembered. Though not himself the originator of the evolution hypothesis, nor even the first to apply the conception of descent to plant or animal organisms, Darwin was undoubtedly the first thinker to gain for that conception a wide acceptance among biological experts. By adding to the crude evolutionism of Erasmus Darwin, Lamarck and others, his own specific idea of natural selection, he supplied to the idea a sufficient cause, which raised it at once from a hypothesis to a verifiable theory. His kindness, honesty of purpose, devotion to truth, and attachment to his friends, rendered him no less remarkable on the moral and emotional than on the intellectual side of his nature.

1. Tierra del Fuego.

[From the 'Voyage of the "Beagle."']

P. 1, l. 3. This extract is dated *December 17th*, 1832.

l. 3. **doubled**—sailed round. [Have a good map before you.]

l. 16. **a fine piece of**—Is this phrase commonly applied to *water*? What does it mean here?

P. 2, l. 5. **within hail**—Meaning? What is the other meaning of 'hail'? Cf. *hale*. See p. 12, l. 25.

l. 23. **guanaco**—a South American mammal of the camel family.

l. 26. **coppery**—Compare *golden, silvern, silver, leaden, steely*.

l. 28. **fillet**—a thin band, especially one intended to confine the hair, as here. [The plural of *hair*—*hairs*—has a special restricted meaning.] See a dictionary for other meanings.

P. 4, l. 5. **Der Freischutz**—In German folk-lore, a marksman celebrated for his compact with the devil. He obtained from the devil seven free bullets, six of which always hit the mark, and the seventh the devil directs at his pleasure. The name of a famous opera by Weber.

l. 15. **which were given me**—[Note this construction with the *ethic dative*].

l. 16. **breast**—Cf. *bosom, chest, heart, ribs*, in all their uses.

l. 20. **Captain Cook**—The discoverer of Australia, and great Pacific explorer.

P. 5, l. 1. **which of us for instance**—[Watch carefully the manner in which a scientist builds up his theories by generalising the details of his scattered and minute points of observation.]

l. 6. **Caffres**—Kaffirs—natives of South Africa.

l. 13. What does to **strike up** a song mean?—Cf. '*strike*' with other particles such as down, out.

P. 8, l. 26. **hairs**—Nouns of 'uncountable' or discontinuous quantity generally change their meaning to have a plural, e.g., glass, iron, copper, etc.

l. 14. **officer on watch**—on duty, navigating the ship. '*Watches*' are usually periods of four hours.

P. 9, l. 22. **a band of peat**—a belt or zone of peat growing all round above the tree level.

P. 11, l. 16. **box**—an evergreen shrub or small tree being extensively used as a hedge or border in gardens. It is capable of maintaining almost any shape to which it is pruned.

l. 33. **a scene of savage magnificence**—How would you paraphrase this expression? Translate it.

P. 12, l. 11. **The 'Beagle' got under weigh**—on the 21st December. Compare *under way* used by Speke, p. 103, l. 20.

l. 21. **weather-bow**—the front part of the ship exposed to the weather. Notice that *bow* here rhymes with *how*.

l. 31. What does **surge** mean?

P. 13, l. 28. **the form of a hare**—the seat, bed, or lair of a hare.

P. 15, l. 19. **sealing-master**—the master of a vessel out to to catch seals.

l. 32. **Gauchos**—the native inhabitants of the pampas. They are of mixed Spanish and Indian breed.

P. 17, l. 29. What are '**the elements**'? Cf. p. 20, '*warring elements*.'

P. 20, l. 16. **up the wind**—**up to the wind**—Translate these phrases.

P. 21, l. 17. **the yawl**—a small ship's boat, usually rowed by six or eight oars; a jolly-boat.

l. 21. **a snug little cove**—Translate this expression into your vernacular.

P. 23, l. 2. '**If you will not . . . such as these.**'—Which words are '*stressed*' in this sentence?

l. 13. **musket**—an obsolete gun—word obsolete, though *musketry* is still used.

P. 25, l. 4. **one unbroken sweep**—Translate.

P. 26, l. 29. **stentorian**—very loud. *Stentor*, a herald with a very loud voice in the Iliad of Homer (an ancient Greek, the greatest epic poet of Europe).

l. 30. **prodigious**—Cf. enormous, gigantic, tremendous, big, large, great, huge, immense.

P. 27, l. 16. **the three next days**—The more usual arrangement would be *the next three days*, although Darwin's order emphasises the whole period of three days, while usually we think of three successive days.

l. 17. **gardens were digging**—Active or passive? Translate.

P. 29, l. 19. **watch**—See note on p. 8 above.

P. 31, l. 5. **moraine**—an accumulation of earth, stone, etc., carried by a glacier and finally deposited where the ice melts.

P. 32, l. 30. **will have been of any use**—Notice the tense. What does it mean? Translate the whole sentence.

P. 35, l. 2. **Bougainville**—French navigator and geographical discoverer, 1729-1811.

l. 3. '**chef-d'œuvres . . . phénomènes**'—Translation: 'the masterpieces of human ingenuity as they treat the laws of Nature and all her phenomena.'

l. 7. **we saw not a soul there**.—What is the difference between this and 'We didn't see a soul there?' Notice the difference between the uses of *not*. What word or words does '*not*' modify in Darwin's sentence? Translate the two sentences. Cf. p. 206, l. 9, p. 92, l. 16, and note. See note on the Anomalous Finites.

2. An Earthquake.

[From the '*Voyage of the "Beagle."*' Chapter XIV.]

P. 38, l. 6. **This day**—the 20th February.

l. 9. **to rest myself**—Which is the prominent syllable?

l. 12. **sensible**—capable of being perceived by the senses. [What is another very common meaning of this word?] Cf. appreciable.

l. 12. **my companion**—Mr. King, who had been instructed to accompany him to the west coast to take some bearings on the outer coast of Chiloe.

P. 39, l. 21. **Concepcion**—a town in Chile. See a map.

l. 23. **Mayor-domo**—the more common form being *major-domo*. The word has degenerated in meaning from a high

official having charge of a big establishment to the jocular title for a butler or steward.

P. 40, l. 4. **yerba**—a variety of tea from Paraguay.

l. 12. **as the beach did**—Notice this use of *did* and other anomalous finites, to avoid the repetition of an antecedent verb.

P. 43, l. 3. **misericordia**—have mercy, pity. Usually addressed to the Almighty.

l. 33. **cannon**—An obsolete word—Cf. the two meanings of '*canon*.'

P. 48, l. 30. **Mr. Lyell**—afterwards Sir Charles Lyell, F.R.S.—was a geologist, and a lifelong friend of Darwin's. One of the founders of modern geology.

3. The Pampas and the Cordillera.

[*From the 'Voyage of the "Beagle."* Chapter XV.]

Darwin is describing his passage through the Cordillera.

P. 54, l. 9. **talus**—rock debris at the foot of a cliff or slope, or the gentle slope of a curve as it merges into the flat again.

l. 13. **estancia**—the S. American Spanish equivalent of farm, estate, ranch. Also applied to the main building.

l. 19. **cordillera**—(stress on penultimate)—a Spanish word meaning a ridge of a parallel series of mountains. Originally applied to the Andes.

l. 28. **traversia**—a stage, or '*parão*.'

P. 56, l. 1. **mezzotinto**—lit. a half tint. As the sky would be shown by lines and dots.

l. 2. **impervious to sight**—one could not see through the cloud of locusts.

P. 57, l. 6. **wafer**—a thin adhesive disk made of flour, gelatin, etc., and used as a seal. [*Or a thin cake or biscuit.*]

l. 33. **forlorn**—Cf. deserted, sad, unhappy, melancholy, gloomy, dejected, dreary, depressed, oppressed, dismal, mournful, woebegone, lonely, friendless, disconsolate, desolate, comfortless, abandoned, homeless.

l. 33. **alameda**—a promenade, or public walk with poplars growing on both sides of the road. [It is a Spanish word, and is not in current English use.]

P. 59, l. 13. **sedimentary**—formed by matter or mass deposited by water. [The word when thus used is a technical term in geology.]

l. 18. **profoundly deep**—What is the force of *profoundly*? See note on p. 80, l. 5, *infra*.

l. 26. **silex**—silica, in the form of quartz, etc.

P. 61, l. 20. **detritus**—matter worn off from solid bodies. [A geological term.]

l. 61. **arriero**—a muleteer. [Spanish.]

P. 62, l. 3. **Incas**—The reigning and aristocratic order in Peru from the 13th to the 16th century. The advanced civilisation of the Incas perished under the conquering Spaniards.

P. 63, l. 19. **madrina**—lit. '*the little mother*'—the leading mule of a convoy, which had a bell attached to its neck.

P. 64, l. 9. **pensive**—What does the word mean? Was the 'stillness' *pensive*? Cf. thoughtful, meditative, dreamy, quiet, etc.

l. 13. **My excursion** only cost me twenty-four days. Translate.

4. The Galapagos Islands.

[From the '*Voyage of the "Beagle."*' Chapter XVII.]

P. 64, l. 17. **these islands**—the group known as Galapagos Archipelago. The natural history of these islands, Darwin says, is 'eminently curious,' 'deserves attention.' He notices 'a most singular group of finches'; the flowers are 'peculiar,' the distribution of the tenants of the Archipelago is 'wonderful'; 'the natural economy of the islands,' 'the amount of creative force,' all 'strike him with wonder.' His visit to these islands played an extremely important part in inspiring his theory of the Origin of Species by an evolutionary process of Natural Selection.

P. 72, l. 24. **pericardium**—membranous sac enclosing the heart.

P. 74, l. 3. **dorsal plate**—the shell on its back.

l. 14. **Bucaniers**—buccaneers. See *Enc. Britt.*

l. 29. Note that **peculiar** does not mean *queer*, *singular*, or *curious*. What are the vernacular equivalents of these four words?

P. 77, l. 14. **species or races**—are distinguished in natural history by the fact that a *Species* is a group subordinate in classification to a *genus* (a *class* in common parlance), the members of a species differ only in minor detail. *Race*, on the other hand, denotes a group of persons or animals, or plants connected by common *descent*, or posterity. *Variety* is another term you should understand.

P. 78, l. 19. **nearly so wonderful**—How would you distinguish between the significance of 'would not be so wonderful,' 'would not be nearly so wonderful,' and 'would not be wonderful'? Translate all three in suitable contexts.

P. 79, l. 31. **transportal**—This word is very rarely used—yet the other cognate nouns *transport*, *transportation* would not do here. Why?

P. 80, l. 5. **profound depths**—Is the phrase tautological? *profound* is very much the same thing as *deep*, yet *profound* depths is much stronger than *great* depths, and *deep* depths would be an impossible combination. Collect similar combinations.

DAVID LIVINGSTONE, missionary and traveller, was born at Low Blantyre, Lanarkshire, on the 19th March, 1813. He worked in a cotton factory from the age of ten to twenty-four. Dick's *Philosophy of a Future State* had a profound effect upon him, and he determined to be a missionary. With this in view he qualified himself as a doctor of medicine, and was attracted to Africa by Dr. Moffat. He was ordained by the London Missionary Society in 1840, and in the year following he left for the Bechuana country in South Africa, where he laboured for several years. Repulsed by the Boers in his efforts to plant native missionaries, he travelled northward and discovered Lake Ngami. He determined to explore the whole country westward to the Atlantic, and eastward to the Indian Ocean. The journey was completed from June 1852 to May 1856 with the help only of a few followers amid sickness, perils, and difficulties without number. But a vast amount of information was gathered with regard to the hitherto unknown parts of Africa. Not the least important of his discoveries was the Victoria Falls of the Zambesi. He returned to England and was enthusiastically welcomed. He stayed at home through 1857, and published his *Missionary Travels*. He returned to Africa as the leader of an expedition to explore the Zambesi, Shiré, and Rovuma, and discovered important geographical points in Central and East Africa. He came to the conclusion that Lake Nyasa and its neighbouring country was the best field for commercial and missionary work, though he was hampered by the Portuguese authorities and the slave traders in the district. The expedition, which had been financed by the English Government, was recalled in 1863, and Livingstone continued his explorations on foot along the northern banks of Nyasa at his own expense. He came to Bombay in a little steamer navigated by himself, whence he left for London in 1864.

A proposal was made to him by the Royal Geographical Society to return to Africa and settle a disputed question regarding the watershed of Central Africa and the sources of the Nile. In March,

1866, he started from Zanzibar, pressed westward amid innumerable hardships, and in the following two years discovered Lakes Mweru and Bangweulu. He was obliged to return to Ujiji for rest. He travelled again westward as far as the river Lualaba, thinking it might be the Nile, but far from certain that it was not, what it proved afterwards to be, the Congo. On his return after severe illness to Ujiji, Livingstone found there H. M. Stanley, sent to look for him by the *New York Herald*. Determined to solve the problem, he set out once again, but on the morning of 1st May, 1873, he was found by his attendants, dead. His faithful people embalmed his body and carried him to the coast. He was conveyed to England and buried in Westminster Abbey.

Livingstone is one of the greatest of African explorers, because of the zeal and self-denial with which he devoted his life to the discovery of unknown regions and wished to take there the light of religion and the best human culture.

He was not a scholar and is not a very successful writer from the literary point of view. His English is the English of a self-made man, but it is simple, direct, and clear, and expressive of his strong character, and his zeal and earnestness in his great work.

1. Elephant-Hunting.

[From '*Missionary Travels in South Africa.*' Chapter XXVIII.]

P. 85, l. 1. **the country**—Round about Zambesi. See introduction to this section and a good map.

l. 4. **large game**—or 'big game'? Cf. big, great, and adjectives such as enormous, tremendous, huge, vast, gigantic, etc.

l. 11. **rivulets**—*-let* is a diminutive suffix often with a picturesque or affectionate or pejorative 'feeling-tone,' e.g. streamlet, ringlet, bracelet, anklet, pamphlet, booklet, kinglet, etc. Cf. lordling, p. 140, l. 33.

P. 85, l. 21. **balls**—bullets, or very large shot.

P. 86, l. 3. **turned short off**—What does this mean? Translate the sentence.

l. 5. **balked, etc.**—not to miss a chance, or opportunity. Rhymes with 'walked.'

l. 9. **right glad**—very glad. [A colloquial expression in the North of England and Scotland—not in 'received' English.]

l. 12. **cutting up**—Cf. 'to cut' with other particles: to cut down, across, in, into; and also 'up' with other verbs: to stand up, to dry up, to finish up, to end up, etc. You will now appreciate the full meaning of 'cutting up the elephant.'

1. 18. **beheld**—Would you use this word in speech? Cf. look, see, gaze, glare, stare, and other verbs of sight. Cf. viewing, p. 89, l. 32.

1. 33. **elephantine**—here in its literal sense of *pertaining to an elephant*. Generally, however, the word means *heavy* in movement or form, lacking in grace, and it suggests this to some extent here also.

P. 88, l. 15. **proboscis**—a learned word for the *trunk* of an elephant. A stilted expression not to be commonly used.

1. 21. **temerity**—rashness. [The word is not to be confused with timidity.] Is *revenge* correct in this context?

P. 89, l. 4. **Shriek**—Be sure you understand the differences between cry, scream, screech, squeak, squeal, howl, whine, etc.

1. 16. **staggered**—Compare the verbs totter, titter, glitter, flutter, flicker, stutter, splutter, clatter, chatter, blubber, hover, quiver, shiver, gutter, mutter, and many others. The actions described by these verbs are usually iterative and often diminutively iterative. The common phonetic characteristics are probably associated with this 'feeling.' Similar phonetic associations occur in German and the Scandinavian languages.

1. 27. **my own blood was up**—that is, in the excitement of the chase; in the heat of the moment.

1. 29. **temptation to engage**—What does *engage* mean here? What are the commoner uses of the word?

2. Through an African Forest.

[From 'Last Journals.' Vol I., Chapter VI.]

P. 90, l. 13. **studied**—deliberately tried to (waste time). [What is the more common sense of *study*—verb.]

1. 27. **Chimuna's**—African villages, especially important ones, are often described in this way, by the name of a prominent or well-remembered chief.

1. 27. **we came on**—Meaning?

P. 91, l. 3. **eland**—an African antelope strong in build.

1. 4. **baama**—another variety of African antelope, called hartebeeste by the South African Dutch.

1. 8. **foray**—Cf. *marauders* below, l. 29.

1. 11. '**Another crowd were**'—Compare below, p. 92, l. 8, 'a long line of villagers *was*.'

1. 17. **milando**—fine or penalty—'proceedings.'

1. 19. **spoor**—the tracks or footprints.

1. 21. **What of that**—What need to pay attention to that ! What does that matter ! An exclamatory phrase in speech not commonly used in writing.

P. 92, l. 16. **shako**—a form of military hat, more or less cylindrical, with a plume, 'brush,' or 'pompon' on top. Stress on final syllable as in 'ago.'

1. 16. '**But they remained *not* to fight**'—What word or words does '*not*' modify ? What is its function here ? Cf. They *did not* remain.

1. 27. **stay over**—What does this mean ? Cf. *overstay*. Note also, *look over* and *overlook*. Translate.

1. 33. **furnaces**—Rather out of place. See para. 2.

P. 93, l. 10. **blister**—a counter-irritant producing a blister or redness. Livingstone was a doctor.

1. 19. **euphorbia**—a very widely distributed genus of plant, usually succulent, and often spiny—a sort of cactus—common in Africa and India.

1. 30. **calabash**—shell of a variety of gourd [Vern. *tũṇbā*], used for holding liquids.

P. 94, l. 7. '**Blessed is he that considereth the poor**'—
Psalms 41.

1. 11. **Seldom *are they* disappointed**. Notice the front-shifting of the anomalous finite. This is regular in interrogative sentences. When is it usual in affirmative sentences ? Why here ? Cf. p. 218, l. 8.

1. 15. **gaze**—See note on 'beheld,' above, p. 86, l. 18.

P. 94, l. 24. **the spur-heel**—a projecting heel characteristic of the full-blooded negro.

1. 32. **punctilious**—attentive to petty formalities, careful to discharge nice points of ceremony and respect due to another. Is the phrase *amongst each other* correct ? What would you substitute ?

P. 95, l. 13. **agriculturist**—This is a better form of the word than *agriculturalist*. Similarly, *educationist* is better than *educationalist*.

1. 25. **Whateley**—(1787-1863), a writer and Archbishop of Dublin.

JOHN HANNING SPEKE, an African explorer, was born on the 4th of May, 1827, at Jordans, Ilchester. He joined the Indian Army, and fought in the battles against the Sikhs. During peace he led expeditions into the Himalayas, collecting specimens of animals and plants. In 1854 he joined Burton in a hazardous expedition to Somaliland. Three years afterwards (in 1857), the Royal Geographical Society sent out the two to search for lakes in the equatorial regions of Africa. Speke, while travelling alone, discovered Victoria Nyanza, and saw in it the head-waters of the Nile. In 1860 he returned with Captain Grant, explored the lake, and tracked the Nile flowing out of it. He was about to defend the identification against Burton's doubts at the British Association meeting at Bath, September 15, 1864, when that very morning he accidentally shot himself whilst partridge-shooting.

The Discovery of the Source of the Nile.

[From '*Journal of the Discovery of the Source of the Nile.*'
Chapter XV.]

P. 96, l. 6. **pombé**—a Swahili word; a kind of beer made from various kinds of grain and fruit in Africa. Most often it is made from millet and the meal is left in suspension in the drink, both wholesome and refreshing.

l. 13. **convolvuli**—a genus of plants. The plural now used is *convolvuluses* and not the one in the text. [Give any other examples of words which have lost their foreign plurals and now form their plural by the more usual common methods of formation on English.]

l. 17. **dam**—For another meaning, mark the phrase in Livingstone, '*the dam and her calf.*'

l. 18. **laving**—bathing, washing. [Uncommon in prose; generally poetic.]

P. 98, l. 23—**plodding**—Cf. tramp, walk, stroll, and trudge (p. 212, ll. 26, 32).

l. 32. '**small village only at every fifth mile**'—What word or words does *only* modify?

P. 99, l. 2. **he told at the palace**—Is *told* correctly used?

l. 6. What does *to get into a scrape* mean?

l. 19. **Poor Tom**—Edgar disguised as a half-witted, starving, naked beggar in Shakespeare's *King Lear*.

l. 25. **threading**—Meaning?

P. 100, l. 2—**Waganda**—The people of Uganda.

l. 22. **Old Father Nile**—Formed in imitation of the Latin expression, *Father Tiber*. [Why should rivers be thus alluded to as *father*, *mother*—as in *Mother Ganges* ?]

l. 25. **the first expounder**—Moses, who was put into the bulrushes for safety.

P. 101, l. 22. **Kilimandjaro**.—The highest mountain in the continent of Africa—over 19,000 ft. above sea-level. Although it is almost equatorial, it carries perpetual snow. It is in Tanganyika Territory, formerly German East Africa. On its slopes is grown the finest coffee in the world.

l. 25. **Unjamuezi and Wanjamwezi**—The district and people around Tabora in Tanganyika Territory.

P. 102, l. 6. **Kenia**—The highest mountain in what used to be called British East Africa, now Kenya Colony. It is a very prominent peak and conspicuous physical feature, and can be seen from great distances on the surrounding plains.

l. 21. **got up**—Note the meaning here. What other meanings can this verb have? Cf. get down, get over, etc., etc. The proper use of *get* is very important in English.

P. 103, l. 20. **under way**—Cf. Darwin's *under weigh*.

l. 27. **I spent the day out**—What is the force of *out*? Translate.

P. 104, l. 10. **a baiting-room**—A waiting and resting place at a stage on a journey. The fish were attempting to move up stream. *Bait* (used to catch fish) is a different word probably cognate with 'bite.'

l. 28. **pongo**—a large anthropoid African ape in Western Africa. Here apparently a kind of antelope.

P. 105, l. 1. **description of antelope**—What does *description* mean here? What other sentences can you construct, using the word in this sense? What is the common meaning of the word?

l. 19. **crunching**—Cf. munch, champ, chew, devour, eat, etc.

l. 5. **stretched a point**—exaggerated, went beyond what was warranted by the facts.

l. 8. **reached this in one stretch**—What does this refer to? Meaning of *stretch*?

l. 12. **florikan**—a kind of bustard.

l. 14. **worthies**—What is the significance of the expression? Cf. p. 196, l. 22.

l. 25. **bana**—title of courtesy for Europeans; a nearer spelling would be *bwana*, sahib.

P. 107, l. 16. Should we say **accompanied with**? What is the meaning of *see us off*?

P. 108, l. 4. **stocks**—See an illustrated dictionary or encyclopaedia.

l. 8. What drinks are **brewed**? What other things can be said to *brew*? What is the literal meaning of *brew*?

ALFRED RUSSEL WALLACE was born at Usk in Monmouthshire on the 8th of January, 1823. He was educated as a land surveyor and architect, and he practised that profession till 1845, when he took to the study of natural history. In 1848 he went to the Amazon with another naturalist and there spent four years. In 1854 he went to the Malay Islands and Papua, and made there a prolonged stay of eight years. During this scientific tour he arrived independently at the theory of Natural Selection, though he did not use the terms employed by Darwin. He died on the 7th November, 1913, leaving behind a large number of valuable works. The more notable among them are *The Malay Archipelago* and *Contributions to the Theory of Natural Selection* (1869 and 1870), two of his best known works; *On Miracles and Modern Spiritualism* (1875), contributes a vindication of views rarely entertained by men of science; *The Wonderful Century* (1898) and *Man's Place in the Universe* (1903) put forth a reasoned appeal for land nationalisation and social equality in civilised communities. An *Autobiography* (1905) completes a varied and interesting selection from the numerous works of Dr. Wallace.

In these extracts his style is at its best in the story of the Rajah's Census, which is told with the skill and charm of a professional story-teller.

1. The Hill Dyaks of Borneo

[From '*The Malay Archipelago.*' Chapter VI.]

P. 109, l. 4. **Sir James Brooke**, Rajah of Sarawak, was born at Benares, April 29, 1803, and died in England, June 11, 1868. He was an English adventurer who became the Rajah of Sarawak, Borneo, and later governor of Labuan under the British Government. He suppressed piracy in the East Indian Archipelago.

P. 112, l. 3. **head-hunter**—hunters of human beings for their heads—but they are not cannibals.

P. 113, l. 31. **Malthus**—a famous economist of the nineteenth century (*d.* 1835), who put forward the theory that human population tends to increase quicker than the output of the means of subsistence, and who advocated checking increase of population.

P. 115, l. 30. **Bugis**—a Mohammedan tribe inhabiting a large part of Southern Celebes. See a map.

P. 116, l. 18. **ground down**—Meaning ?

P. 117, l. 27. **assimilate**—Meaning ? Cf. *similar*.

P. 118, l. 9. **sneered at**—Cf. to deride, to scoff, to laugh at, to snigger, to gibe, to jeer, to mock, to despise, to disparage, etc.

2. How the Rajah took the Census

[From 'The Malay Archipelago.' Chapter XII.]

P. 118, l. 18. **Lombock**—an island of the lesser Sunda group, East Indies.

P. 119, l. 22. **krisses**—Sing. *kris*, usually spelt *creese*, a Malay dagger with a serpentine blade.

P. 120, l. 10. **thought and thought**—Meaning ?

P. 122, l. 10. **sirih**—betel-pepper.

P. 123, l. 6. **to bring up the rear**—Translate.

3. Races of Man in the Malay Archipelago

[From 'The Malay Archipelago.' Chapter XL.]

P. 128, l. 22. **Polynesian**—the peoples inhabiting the small islands in the Pacific Ocean east of Australia. You should try to locate on a map all places mentioned in the texts.

P. 129, l. 1. **indigenes**—native to the soil.

P. 129, l. 15. **countless**—Cf. numberless, innumerable, untold, without number, unnumbered, infinite, etc.

l. 32. **mongrelism**—hybrid breeding; cross-breeding.

P. 131 l. 1. **Huxley, Thomas** (1825-1895), a great English biologist, and a brilliant advocate of the Darwinian Theory.

P. 133, l. 10. **a perfect social state**—Cf. Rousseau's idea of

P. 135, l. 4. **the 'natural' man**. Of contemporary anthropologists, Professor Elliot Smith and his school approach most nearly Wallace's point of view.

P. 134, l. 32. **gigantic**—Cf. enormous, huge, tremendous, gross, large, big, great. All these have their special uses.

P. 135, l. 7. **absolutely**—independently, unconditionally by itself; opposite of '*relatively*.' What is another common use of the word ?

Note. **Parish paupers**—poor people who are maintained in workhouses at the public expense, or who receive '*poor relief*.' Poverty is not so cruel in a hot country. Remember the date this was written. There are still many social evils in the West, and we still have '*Social Reformers*.'

CHARLES MONTAGU DOUGHTY, British explorer and writer, was born in 1843. The adventurous journey, an account of which was published in *Arabia Deserta*, was undertaken through Northern Arabia in 1875. He remained in the country for over two years, and went through many dangers and hardships. *Arabia Deserta* is now recognised a classic worthy to rank with the thrilling accounts of the Elizabethan Voyagers, whose style it successfully copies. In the 'nineties of the last century Doughty's value as a traveller received full recognition and his writings have been known among all lovers of travel and literature. In 1912 the Royal Geographical Society bestowed on him the founders' gold medal.

His later years were devoted to poetry and poetic drama, but he remained the writer of one book—though he had written much before, and did valuable work after—the *Arabia Deserta*. He died in January, 1926.

His style is worthy of note for its rich and quaint diction, for a certain pseudo-oriental turn of phrase and cadence. His observation of men is keen, and his dealings with them characterised by tact and caution. He has shown the fullest sympathy with the ways and manners of the Arab, though he himself was a very orthodox Christian.

NOTE ON DOUGHTY'S LANGUAGE

Doughty's English is not the English of his own generation. He affects an archaic style reminiscent of the Elizabethan travellers, and of the Old Testament, with a rich mixture of old English and Scandinavian words and words used in their original sense. He also affects grammatical forms now entirely obsolete. It is impossible to examine Doughty's style in detail in a short note, but a few points are suggested, in order to facilitate an appreciation of the extracts and to show how the student may learn a good deal about plain English by a careful study of them. See the Exercises in Appendix B.

Vocabulary.—Uncommon, archaic, and invented words are used, or obsolete or quaint meanings are attributed to words still in common use; e.g., study the following words as used in the text:

bever.	thrilled.	thrift.	nigh.
stived.	clerkship.	unthrift.	afterward.
seethe.	morrow.	sometime.	sort.
frayed.	pleasance.	presently.	wise.
afterward.	perforce.	most.	oft-times.
whereof.	wherein.	an.	cause.
yet.	while.	lately.	removed.
		toward.	ruckling.

Grammar.—One of the most prominent characteristics of contemporary English is the use of the twenty-four Anomalous Finites given below. These 24 words are not to be considered as parts of

classified verbs, but as 24 separate words, having different ways of combining phonetically with the negative particle *not*, and their own special strong forms, and weak forms. (Note that strong forms can occur in unstressed positions.)

The 24 anomalous finites.—

am.	has.	should.	might.
is.	had.	will.	must
are.	do.	would.	ought.
was.	does.	can.	need.
were.	did.	could.	dare.
have.	shall.	may.	used (to).

Note.—

1. *All* English negative sentences (*i.e.*, employing the negative particle *not*) *must* be formed either by placing *not* immediately after one of these anomalous finites, or by fusing into one word the Anomalous Finite and *n't*.

2. We get emphasis (the emphatic affirmative) by stressing one of them.

3. We use them largely in asking questions by placing them before the subject of the interrogative sentence.

4. We use them regularly to avoid the repetition of a verb previously used or referred to.

Now Doughty forms his negative in an archaic way by using the particle *not* with the simple affirmative form of the verb—*e.g.*, instead of writing *he does not help*, he writes *he helps not*; *if he went not*, instead of *if he didn't go*. Collect examples of this peculiarity in the text. On the other hand he uses *do* and *did* where, in modern English, we should omit them—*e.g.*, '*his affairs do call him forth*'; '*if I did but ask*.' (See Exercises in Appendix B.)

Doughty regularly uses the old subjunctive mood, now practically obsolete, especially after *if*, *except*; and similar particles—*e.g.*, *if he have—if he agree*—etc.; *i.e.*, the third person singular present tense without the final '*s*' of the indicative.

Also he commonly uses a double object, by first giving the real object in a preparatory phrase, and then employing '*it*' in the main clause. (See the Exercises in Appendix B.)

He uses the ethic dative regularly. He uses '*an*' as the indefinite article before words beginning with the aspirate.

1. The Nomad Life in the Desert

[From '*Wanderings in Arabia*.' Chapter V.]

P. 137, l. 2. **Zeyd**—name of the sheikh, or Beduin chief, whose hospitality he is enjoying at the moment.

l. 2. **would**—stressed—archaic—wished.

- l. 10. **come to the herdsmen**—Function and meaning of *come* ?
- l. 12. **menzil**—is also a vernacular word, though in a slightly different sense.
- l. 12. **nâga**—a cow-camel.
- P. 138, l. 5. **welfaring**—literally, faring well; archaic.
- l. 30. **faggot**—a bundle of logs or twigs for fuel.
- P. 140, l. 6. **thelûl**—dromedary—a riding camel.
- l. 28. **to help lift**—Notice that after *help*, 'to' can be omitted.
- P. 141, l. 2. **hind**—dependent, menial servant, labourer. Cf. the grammatical function of *him* and *her* in l. 7.
- P. 141, l. 26. **beyt**—house; the word exists in several Urdu compound names.
- P. 142, l. 22. **morrow**—morning; literal meaning.
- l. 28. **brayed**—See note on p. 158, l. 10.
- l. 30. **It chanced Zeyd to lose**—Would you use this construction in modern English ?
- l. 31. **frayed**—frightened. Cf. *afraid*.
- P. 143, l. 14. **simples**—herbs.
- l. 19. **seyl**—a rivulet.
- l. 19. **wady**—a valley. Cf. vernacular.
- l. 24. **dîra**—the circuit of a nomad tribe; an oasis settlement.
- P. 144, l. 7. **lure to them**—Is *lure* commonly used in this way ?
- l. 30. **the cows**—the cow-camels.
- P. 145, l. 22. **you shall see housewives**—Meaning of *shall* ?
- P. 146, l. 2. **stead**—literally place. Cf. *homestead*; *instead*.
- l. 9. **clients**—dependents of the family.
- l. 16. **halse**—neck, throat. [An obsolete word in English. Cf. Germ. *hals*=neck.]
- l. 28. **léban**—a drink of the Arabs, consisting of coagulated milk, often mixed with water.
- P. 147, l. 13. **reckonings**—Meaning ?
- l. 28. **elf**—a fairy, a little or mischievous creature.
- l. 31. **oblation**—things offered to God; set apart in God's name.
- P. 148, l. 16. **surra**—tribute.
- P. 149, l. 20. **abroad**—What does it usually mean, and what does it mean here ?

l. 26. **Zeyd was from home**—Notice this use of *from*=*away from*. Archaic.

P. 150, l. 1. **the most**—archaism = 'most of them'; *yet* = 'still.'

l. 17. **limning**—sketching, drawing.

l. 30. **wise**—manner. [An archaic sense of the word.]

P. 151, l. 7. **so every one is come again**—Meaning of *so*?

l. 12. **lubber**—big strong fellow; man, perhaps with an 'echo' of 'mate' or 'lover' here.

l. 12. **slug**—pass slowly and wearily. A *slug* is a slow-moving creature. Cf. the expression *at a snail's pace*, and sluggish, see note on p. 160, l. 7.

l. 29. **thrilled**—Is this the common usage? What does it mean here? Cf. drilled.

P. 152, l. 14. **webster**—Compare *spinster*; *-ster* is the old English feminine ending. *Webster*—one who *weaves*. Cf. *web*.

P. 153, l. 17. **thrift of wool**—Meaning of *thrift*?

l. 19. **fathom**—a measure of six feet; *chiefly* used in taking soundings in the sea.

l. 22. **girby**—a water skin. [Vern. *mashak*.]

l. 23. **semily**—a milk skin.

l. 25. **fairing**—a present bought at a fair or a market.

P. 154, l. 4. **ark**—The Ark of the Covenant. See Exodus xxxvii.

l. 12. **stived**—stuffed or stowed away. [Not current.]

l. 12. **pokes**—bags, small sacks. [Used in dialect English only, and in the expression, 'buying the pig in the poke,' *i.e.*, without seeing it.] Cf. pocket.

l. 15. **to the Semitic humour**—in accordance with the peculiar bent of the Semitic nature. [Note this use of *humour*; and compare *to humour a man*.]

l. 25. **samn**—clarified butter. [Vern. *ghee*.]

l. 29. **sorry**—dull, cheerless, gray. [Compare the expression *to cut a sorry figure*.]

P. 155, l. 2. **tabernacle**—In Jewish religious history, *tabernacle* was the tent used by the Jews as a sanctuary, as a sacred place of worship before they settled down in Palestine. What is the usual meaning of this word? See Exodus xxxvi.

l. 25. **chance**—Meaning?

l. 32. **reavers**—Cf. *bereave*, and *robber*.

P. 156, l. 12. **suk**—a street, or bazar.

P. 157, l. 2. **which keep**—What is the antecedent? Is the use of *which* regular?

2. Life in the Wandering Village

[From '*Wanderings in Arabia.*' Chapter VI.]

P. 158, l. 10. **brayed**—see *pounded* below—beaten or crushed into small pieces. Only survives in dialect. Cf. *to bray*, used of donkeys.

l. 16. **scour**—to clean out thoroughly, as with sand or earth. Also used metaphorically—*e.g.*, 'He scoured the horizon, but no sail could be seen.' 'The troops scoured the desert, but the marauders could not be found.'

l. 23. **simmer**—to boil gently and slowly. Cf. *glimmer*. See note on *staggered*, p. 89, l. 16.

P. 160, l. 7. **richard**—Now only used as a masculine proper name. Here Doughty probably intends the word to be taken as a derivative of the word '*rich*,' with the pejorative suffix '*ard*'—*i.e.*, a *petty proprietor*. Cf. *drunkard*, *sluggard*, *laggard*, *braggart*, *dullard*, *coward*, *dotard*, *niggard*. See *niggard* below, l. 19. Cf. *lordling*, p. 140, l. 33.

l. 8. **coxcomb**—vain, boastful of their looks or possessions.

l. 24. **sybarite**—[like] the inhabitants of Sybaris, an ancient Greek city of Southern Italy. They were known for their love of pleasure and luxury.

l. 27. **grounds**—the sediment, the used grains of coffee.

l. 29. **lye**—any strong alkaline solution; here, drops of strongly brewed coffee left at the bottom of the pot.

l. 30. **bever**—[obs.]—Cf. *beverage*—drink.

l. 30. **spare**—save. Is this a regular use of the word nowadays?

P. 161, l. 6. **deny to divide**—What should we say normally here?

l. 27. **stay**—Notice the author's use of *stay* throughout these extracts.

P. 162, l. 24. **Motlog**—Chief of the tribe.

P. 163, l. 4. **ghrazzu**—a foray. Cf. note on p. 91, l. 8.

l. 29. **next governed**—What is the meaning of '*next*' here?

P. 164, l. 2. **expedite**—done with dispatch, quickly. Is the word used normally here?

l. 7. **smelling of**—Cf. to smell of the lamp, to smell of jobbery or corruption, suggesting.

l. 8. **human forfeit**—capital punishment.

l. 12. **excised the sores**—the Law of Moses ordains 'an eye for an eye, a tooth for a tooth.' See Exodus xx. ff.

l. 25. **hoary**—white; generally with age. Cf. *hoar frost*.

l. 29. **mattock**—a tool with a steel head for cutting or loosening hard ground.

P. 165, l. 14. **foster-camels**—cow-camels yielding milk. They were practically 'foster-mothers' to the horses—cf. below *foster-earth*. Compare also the verb 'to foster'—'The malcontents fostered rebellion in the land.'

l. 29. **rimth**—a variety of shrub.

P. 168, l. 14. **yeaning**—giving birth.

P. 169, l. 13. **khāla**—the empty desert. Cf. the Urdu word for *empty*.

l. 22. **for man is of one mind everywhere**—A lesson amply brought home to one by all explorers and wanderers among the peoples of the world.

P. 170, l. 8. **ninnery**—foolish weak-minded talk. Cf. *roguery*, *trickery*, etc., and see note on *shrubbery*, p. 179, l. 10.

l. 13. **braying**—loud and raucous noise; *bray*, the loud noise of an ass—compare this word with another use of *bray* in these extracts.

P. 171, l. 19. **fantasy**—fancy; imagination. An archaic word in this sense.

P. 172, l. 3. **sectator**—a member of a sect. [Not current.]

EDMUND CANDLER, author and traveller, was born on the 27th of January, 1874. He was educated at Repton and Emmanuel College, Cambridge. He graduated in 1895. He travelled widely in the East, and was for some years Principal of the Mohindra College, Patiala. He went with the Tibet expedition of 1904 as special correspondent of the *London Daily Mail*. He was then seriously wounded in the engagement at Tuna and lost a hand. During the last war he was correspondent of the *Times* and *Daily Mail* on the Western Front till 1915, when he went to Mesopotamia as official eye-witness. He was several times mentioned in despatches. He was Director of Publicity in the Punjab during 1918-1919.

Mr. Candler was a gifted writer, and wielded an easy fluent pen. He has watched the affairs in the East with a keen and observant eye, and, even perhaps more than Kipling among men of letters, has understood the Eastern mind. *Sri Ram the Revolutionist*, a novel about a student politician of pre-Reform days, is full of sound trenchant criticism, though unsympathetic in outlook from the Indian point of view. His last work, *Abdication*, is another essay in fiction with a moral.

Of the works dealing with travel, *The Unveiling of Lhasa* (1905) and *The Long Road to Baghdad* (1919) are among the better known. He died in 1927.

1. The Chumbi Valley

[From 'The Unveiling of Lhasa.' Chapter VI.]

[Don't forget your map.]

P. 175, l. 8. **arable**—fit to be cultivated ; fit for tillage. The root of the word is in 'arya,' and even in 'art.'

l. 14. **Kandersteg**; **Lauterbrunnen**—in Harz Mountains, Prussia.

l. 15. **mani-walls**—walls with the Buddhistic formula *Om mani padmne ham* written on them.

l. 21. **quiet tints**—Cf. a colour that 'shouts.' What does *quiet* mean here ?

P. 176, l. 14. **Ruskin**—An art critic, prose-writer, and social reformer of the Victorian era. He is known for his impassioned, highly elaborate and musical prose style.

l. 21. **genius**—Meaning ?

l. 22. **arrest**—to catch ; to isolate and describe.

l. 23. **weak, colourless words**—Why ?

l. 25. **Milton**—The great English epic poet of the seventeenth century. See *Paradise Lost*, Books I., II., for his descriptions of hell. Here is an extract :

'At once, as far as Angels' ken, he views
The dismal situation waste and wild :
A dungeon horrible, on all sides round,
As one great furnace flamed ; yet from those flames
No light, but rather darkness visible
Served only to discover sights of woe,
Regions of sorrow, doleful shades, where peace
And rest can never dwell, hope never comes
That comes to all ; but torture without end
Still urges, and a fiery deluge, fed
With ever-burning sulphur unconsumed.'

Bk. I., 59-69.

P. 176, l. 26. **Lord Byron**—An English poet of the early nineteenth century, widely read all over Europe. He was known for the novelty of his themes, his daring imagination, and power of graphic description.

l. 27. **Childe**—Knight.

l. 27. '**Childe Roland to the Dark Tower came**'—a poem by Robert Browning (1812-1889) describing a peculiarly ugly and weird landscape.

l. 28. **Wordsworth**—leader of the 'Romantic Movement.' His poems are steeped in the love of Nature.

P. 176, l. 30. '**Kubla Khan**'—by the romantic poet, Samuel Taylor Coleridge. It is a true dream-poem, as it was the result of an actual vision in sleep.

'But oh! that deep romantic charm which slanted
Down the green hill athwart a cedarn cover!
A savage place! as holy and enchanted
As e'er beneath a waning moon was haunted
By woman wailing for her demon-lover!
And from this chasm, with ceaseless turmoil seething,
As if this earth in fast thick pants were breathing,
A mighty fountain momentarily was forced,' etc., etc.

P. 178, l. 3. **I will try to explain as logically as possible**—See Exercise 24, Appendix B.

l. 11. **homelike**—like home (England). Cf. homely.

l. 33. **hung sheer over**—stood steeply over. What are the other uses of 'sheer'?

P. 179, l. 6. **jostling one another**—Meaning? Cf. rustle, bustle, wrestle, hustle, etc. See note on *staggered*, p. 89, l. 16.

l. 6. **nook**—Cf. corner, recess, niche.

l. 7. **cranny**—a small crack, or crevice. Cf. chink, cleft, hole, gap, slit, fissure, rift.

l. 9. **dowdy**—shabby, lacking in grace of form or colour, the opposite of smart, 'dressed.'

l. 10. **shrubbery**—for the force of the suffix, cf. jewellery, embroidery, millinery, etc., also 'greenery,' l. 21.

P. 180, l. 17. **one**—Note the repetition of *one*. It cannot take another pronoun, such as *he* or *she*, after it, but must be repeated.

l. 19. **the profane**—those who do not believe in the particular form of religion alluded to. Those who remain outside the inner sanctuary. Those who have not been initiated, who do not understand. '*Outsiders.*'

l. 24. **vortex**—lit. a whirlpool, a seething mass of whirling fluid. Figuratively—as here—any system of things which swallows up or engrosses those who approach it.

l. 30. **revetment**—retaining-wall, or facing of a rampart, or wall of a fort.

P. 182, l. 2. **chubby**—Translate.

l. 21. **sangar**—a small breastwork, or rifle-pit, to hold a few men. A vernacular word adopted into English.

1. 27. **chimney that draws**—Meaning of *draws*?

P. 183, l. 16. **wag**—a humorist, one full of sport and humour, a joker. [One of those words that are difficult to translate or paraphrase.]

P. 183, l. 20. **would require some sitting**—Translate.

1. 21. '**show**'—Why in raised commas?

P. 184, l. 25. **Manipur**—rising of 1891.

1. 30. **voluntary**—took a toss—a clean throw into the hedge.

P. 185, l. 15. **deploy**—spread out from column into line.

1. 17. **jink**—frisk about sportively, irregular nimble movement.

1. 24. **field**—of seventy persons hunting—or 'in the field.'

1. 25. **spurt**—Cf. below, p. 193, l. 30, and p. 213, l. 20.

P. 186, l. 13, 14. **minal, Argus-eye**—varieties of pheasant.

1. 24. **is not sport**. Why not? See below, l. 27—*for the pot*.

1. 33. **mauve**—rhymes with *stove*.

P. 187, l. 2. **fishermen**—What sort of 'fishermen'?

1. 25. **flushed**—Cf. '*put up*' below, l. 27, and on p. 186—Suddenly come across and surprised in numbers; disturbed, p. 186, l. 21.

P. 188, l. 19. **egress**—way out. Cf. exit, issue, outlet, opening. Cf. also, ingress, entry, entrance, inlet, way in, opening.

2. Phari Jong

[From '*The Unveiling of Lhasa.*' Chapter IV.]

P. 189, l. 4. **huddling**—See p. 200, l. 11, and p. 201, l. 1 below, and notes on p. 89, l. 16, and p. 179, l. 6.

1. 4. **brazier**—a grate or open pan or framework for holding fire. [Vern. *angithi*.]

1. 5. **men drop in**—Translate. Cf. come in, drift in, blow in.

1. 8. **sacrifice force for euphemism**—speak not as we feel, but in a polite roundabout way, so as not to offend the sense of propriety in our readers.

1. 9. **euphemism**—'Substitution of mild or vague expression for harsh or blunt one.' Do not confuse this word with *Euphuism* (after Lyly's *Euphues*).

1. 10. **bargee**—a boatman with a reputation for abusive and strong language.

l. 11. **feelingly persuade us**—convince us through our senses. The 'quotation' is from Shakespeare's *As You Like It*, Act II., Sc. 1., l. 11:

'That feelingly persuade me what I am.'

P. 190, l. 27. **machicolated**—furnished with openings between supporting corbels for dropping stones, etc. on those attacking the fort.

l. 30. **breach**—cognate with 'break.' Cf. speak, speech, drink, drench, cling, clench, wring, wrench, blink, blench, etc.

l. 33. **penned**—What is the other meaning of this word?

P. 191, l. 11. **accretion**—a steady, firm and undisturbed accumulation; a coating covering and sticking to everything.

P. 191, l. 22. **hacking cough**—fits of repeated dry coughs, short but violent; a spasmodic hard dry cough.

P. 192, l. 33. **Naropa**—a Tibetan saint.

P. 193, l. 13. **illuminated**—the letters being decorated with coloured drawings and figures on the margin, and at the beginning and end of a chapter.

l. 17. **chorten**—a sort of dome.

P. 194, l. 28. **stalk**—Meaning? and another quite different meaning?

P. 196, l. 2. **quaint old-world individuality**—something peculiar (and attractive) about the place, reminding one of our older order of things.

l. 5. **Micawber**—A character in Dickens' *David Copperfield*, always in wretched circumstances, but always cheerful, always hopeful that 'something will turn up.' Eventually *it* does turn up and he packs off to Africa with his family and all, as 'some sort of' a judge.

l. 6. **fleets**—passes quickly. Cf. *flight*, *fleeting*, and *fleet of foot*.

l. 12. **argol**—crude tartar. The smoke from the fuel was acrid.

l. 22. **worthy**—Colloquially, as here, a person merely of local fame.

P. 192, l. 2. **to stoop**—Cf. to crouch, to squat, to bend, to bow, to lean.

l. 20. **at length**—meaning?

P. 199, l. 8. **Charles Lamb**—The famous writer of *Essays of Elia*.

P. 200, l. 17. **departs not**—see note on Anomalous Finites.

l. 20. Examine the many uses of '*to keep*' in English.

P. 201, l. 3. **caoutchouc**—a tenacious, elastic substance obtained from the milky juice of many varieties of tropical plants: rubber.

l. 6. **of a morning**—Meaning? What other phrase could you use here?

l. 7. **Sirens** in Greek mythology were sea-nymphs inhabiting an island off the coast of Italy. They lured mariners to destruction by the sweetness of their singing. Hence, a woman who exercises fascination by her artful ways. Here used ironically.

l. 10. **chatter**—Cf. prate, prattle, jabber, jaw, babble, gabble, cackle. See note on *staggered*, p. 89, l. 16.

l. 13. **giggle**—Cf. to laugh, to titter, to chuckle, to grin, to smile, to smirk, to simper, to snigger, to guffaw, etc. See notes on *staggered*, and *jostling*, p. 179, l. 6.

l. 17. **saucy impudence**—Translate.

l. 31. **Bill Sikes**—A thief and murderer in Dickens' *Oliver Twist*. A dirty 'muffled' hairy ruffian.

P. 202, l. 3. **beaune** or **chablis**—Two kinds of French wine.

ROBERT FALCON SCOTT was born at Devonport in 1868. He entered the Royal Navy in 1882, and rose to responsible positions by virtue of his ability, accomplishment, popularity with men and officers, and most of all by his whole-hearted devotion to his noble profession. He was called upon to lead the first National Antarctic Expedition to explore those regions by land. He was certainly fitted to be a leader of this novel and unprecedented expedition. He was acquainted with the work of his predecessors as perfectly as with the climatic conditions of the Antarctic; he had enthusiasm enough to attract and encourage his followers, prudence and sound sense to embark on no rash adventure. As commander of the *Discovery* he led the expedition in 1900, returning in 1904 after having made many important discoveries and amassed much valuable information from a scientific point of view.

The next five years were passed in the Navy and the Admiralty till an opportunity offered itself to lead a very well-equipped expedition with the object of finishing the work that had started so well some years before.

The extracts in this text are taken from an account of this second expedition (1910-1913). The reader may be left to judge for himself of the strength and nobility of character required to make the heroic struggle of Scott and his followers possible. There in the blizzards

of the vast and desolate tracts of snow-covered land these men appear to us as veritable giants fighting against the fearful elements in their last struggle to discover the truth and enrich the stores of man's knowledge of his surroundings.

"There are few events in history to be compared, for grandeur and pathos, with the last closing scene in that silent wilderness of snow. The great leader, with the bodies of his dearest friends beside him, wrote and wrote until the pencil dropped from his dying grasp. There was no thought of himself, only the earnest desire to give comfort and consolation to others in their sorrow."

The extracts are chosen to show the great hopes and active optimism of the preparatory stages, the hard pulling on the Beardmore Glacier, through the strenuous Summit journey to the Pole, disappointment, and even after that the heroic Last March.

The whole diary is written in modern colloquial English, such as is spoken by Englishmen of Scott's class.

You will understand why towards the end the entries become shorter and finally brief and disjointed, and even 'ungrammatical'—but throughout 'muscular' and virile.

1. At Cape Evans.

[From Scott's 'Last Expedition.' Vol. I., Chapter XV.]

P. 203, l. 1. **Amundsen**—born in Norway in 1872. First to navigate the North-West Passage (1906) and first to the South Pole. He attempted to reach the North Pole by aeroplane, but was not successful. He perished recently in a brave attempt to rescue members of the Italian Arctic Expedition by aeroplane.

l. 3. **pretty**—What does it mean here? This is a very common colloquial use.

l. 6. **must**—Substitute 'might,' 'would,' 'ought to,' 'should,' and notice change of meaning in each case.

l. 8. **the sort of thing one is out for**—Scott's English abounds in these colloquial phrases. He uses them simply and effectively without sinking into slangy jargon. Translate the sentence into your own language.

l. 9. **you**—Sir Clements R. Markham, who induced Scott to start on this second expedition.

l. 20. **dependable**—*to be depended upon*. Some people dislike these modern words—*reliable, guessable* [l. 25], etc.—but they are used by the best speakers.

l. 21. **that counts down here**—again colloquial, yet any attempt to render its meaning in other words will prove feeble.

l. 22. **Bill will be sound . . . loyal**—Translate this sentence, taking care to convey what is meant by *sound* and *loyal* in this context.

P. 204, l. 6. **prodigiously**—Cf. enormously, terrifically, stupendously, extraordinarily, etc. Carefully examine the meaning of the words *hardest, tough, daunts, spirit*. Try to translate the sentence.

l. 22. **ever**—Not an easy word to use correctly. Notice its position and use here.

l. 29. **cheery old pessimist**—Apparently a self-contradictory phrase. Does it mean anything?

P. 206, l. 1. **positive**—What does the word mean here, and what is the usual meaning?

ll. 9, 11. **not, will**—See note on Anom. Finites.

l. 23. **it will go hard**—Meaning?

P. 207, l. 4. **girding at**—literally 'preparing to attack'—it means criticising, having a sort of restrained dislike of Australia and all its ways—making fun of—jibing at.

l. 9. **better**—What part of speech? Cf. to improve, to improve upon, to ameliorate.

2. Forestalled.

[From Scott's '*Last Expedition*.' Vol. I., Chapter XVIII.]

P. 207, l. 17. **would land us**—Notice he doesn't say 'will,' 'should,' 'might,' which would not convey the right attitude, though he uses 'ought to' in the next sentence.

l. 22. **sights**—Of the position of the sun at noon (cf. below 'noon sight'), in order to 'work up' his calculation of their position expressed in latitude and longitude.

P. 208, l. 2. Notice the idiomatic use of *see* in 'to-morrow would see us.'

l. 5. **sastrugus**—An irregularity formed by the wind on a snow plain. Often a fantastic shape unlike the ordinary conception of a wave.

l. 17. Notice the use of *compass* as a verb.

l. 22. **The Pole. Yes**—You will appreciate the fulness of meaning of these three words, and particularly of 'Yes.'

P. 209, l. 3. **week-end-one**—A good fat meal such as some people may indulge in when they are enjoying the respite of the week-end.

l. 7. **blowing hard**—Cf. hardly. Part of speech? Collect similar usages.

l. 16. **hoosh**—A thick camp soup with a basis of pemmican.

l. 13. **awful place**—Stress both words and you may retain

something of the literal meaning of awful. This is lost if you only stress 'awful.' Cf. 'awful monotony' in preceding line.

3. The Last March.

[From Scott's 'Last Expedition.' Vol. I., Chapter XX.]

P. 209, l. 28. **disclosed**—Note the force of the word here, and compare the use of *showing* in the same sentence.

P. 210, l. 1. **late**—Cf. *lately*, l. 26.

l. 9. **simply awful**—Colloquial. Many people, especially schoolmasters, object to such phrases. Here is good evidence of its serious use in spoken language. Cf. *infra*, 'something awful.'

l. 10. **very**—Why in italics? Is it the only prominent word? Cf. p. 211, l. 3.

l. 18. **awful beyond words**—Translate. Cf. too awful for words.

l. 21. **R. 46**—The forty-sixth camp on the return march from the Pole, which they left on 18th January. The Last Camp was R. 60 on 19th March.

l. 23. **more than three parts surface**—Meaning?

P. 211, l. 20. **tight place**—More commonly in a tight corner—in a difficult or uncomfortable position.

l. 21. **yet**—Strongly stressed as in the spoken language. Meaning?

l. 31. **real bad**—Colloquial—much stronger in feeling than *really bad*.

P. 213, l. 7. **pemmican** [North American Indian word]—Cake of dried and pounded meat mixed with melted fat and flavoured with currants, etc., to serve as food in camp.

l. 8. **with the chill off**—Not absolutely cold and not really warmed.

l. 8. **telling on all**—Translate.

l. 10. **I overslept myself**—Translate.

l. 13. **this way**—Served in this way.

l. 29. **to see the game through . . . proper spirit**—Why 'game'? and what 'spirit'?

P. 213, l. 20. **his spirits**—Cf. *supra*, 'the proper *spirit*,' and 'we've not got much *spirit*.' Translate these sentences.

l. 28. The sledge **came** as heavy as lead—Translate.

l. 30. **getting through**—Cf. *infra*, 'to see the game through,' 'pull through,' and on p. 219 'fetching through.' We also say 'to win through' and 'to get there.'

P. 214, l. 3. **made** 6½ miles . . . **did** . . . 4 miles—Translate. Notice we can also say 'I did a month.'

l. 8. **hope against hope**—Translate.

l. 14. **kept going**—Translate. Cf. *infra*, 'Kept up our 9-mile days.'

l. 19. **last out**—Cf. the quite different verb '*outlast*'—also cf. 'to live out' and 'to outlive.' We have also 'to hold out,' 'to work out,' etc., etc.

l. 20. **time over**—time spent over.

l. 20. **something awful**—Common colloquialism. What is the grammatical function and meaning of 'something'?

l. 32. **in a very bad way**—Common colloquialism. Translate.

P. 215, l. 5. **in point of fact**—Compare 'In fact,' 'as a matter of fact.'

l. 8. **a dog's chance**—Translate the sentence to show you understand the idiom. For other idioms of this kind see L. Pearsall Smith's 'Words and Idioms.'

l. 15. one **cannot but** try to cheer him up—When could you say 'One *can but* try'?

P. 216, l. 7. **one feels**—Why at the end of the sentence? What is the link with the preceding phrase?

l. 32. **pretty well useless**—Cf. practically useless, pretty useless, quite useless, almost useless, useless. What attitude is expressed by 'pretty well useless' that would not be conveyed by the foregoing substitutes?

P. 217, l. 26. **shudder**—See Note on 'Stagger,' p. 89, l. 16.

l. 33. **Tragedy all along the line**—Translate.

P. 219, l. 26. **felt done** on the march—Translate.

l. 28. **not pleasant to contemplate**—Emphasis by understatement or 'attenuation' has often a touch of humour. Would emphasis by exaggeration or over-statement be suitable here?

l. 33. **spirit**—Why 'this alone between us and thirst'?

P. 220, l. 7. **pannikin**—Small metal drinking vessel. Cf. cannikin, gherkin, lambkin.

P. 221, l. 5. We shall **stick it out**—Cf. I stared *him out*, I sat *it out*, Work *it out*, etc. Translate.

The last scene fixes itself in one's memory by its pathos, tragedy, and heroism.

APPENDIX A

List of Words printed to Show Stress.

THE distribution of stress, force, or emphasis among the words of a sentence in English, or among the syllables of an English word, is very uneven. English is a 'strongly stressed' language. Many Indian languages have what may be called 'even stress.' Hence, even when a word like *economics* is 'pronounced' more or less correctly, the 'accent' will be queer on account of a wrong distribution of stress. The distribution of stress and the accompanying variations of pitch and length determine the rhythms of the language.

The words given below are selected from the text and printed so as to indicate which syllable of a word is to be 'attacked' forcibly and given prominence.

Strongly stressed syllables are printed in black type, and where two syllables of a word are more prominent than the rest, the secondary or weaker stress is indicated by an accent mark *preceding* the syllable affected.

In some words a syllable may be so weak that it tends almost to disappear in rapid speech. In such cases the vowel of that syllable is printed in italics.

'R' is also italicised where it is not pronounced in standard English.

Occasionally, to remove any doubt there may be in the student's mind, the number of syllables is shown after the word in brackets.

Short and long vowels are indicated where necessary.

Our syllable division follows no theory, nor is it etymological. Our purpose is to help the student towards a just accentuation.

A.
abandonment
 'aboriginēs (5)
ac'cumulation
admirable
administering
adversary
affinity
agriculture
 'agriculturist
 allēviate
 a'mēlioration
analogous
apathy
apparent
archaic
 'archipelago
artificers
 'ascertained
assimilate
attribute (n.)
attribute (v.)
avenue
azālea
awry

B.
benevolence
bestowed
bivouac
buttermilk

C.
comparable
comparatively
congruity
credulous
calamity
 'caricature
cavernous
characterised
coincidence
 'colonisation
conjectures
 'commandeered
compatriots
contemplate
contemplative
 or
contemplative
criterion

D.
decrepitude
demonstrative
demonstrators
demoralised
demurred (2)
desultory
developed
dilatoriness
discomfiture
discourse (n.)
discourse (n. and v.)
dispersed (2)
domesticated

E.
efficacy
efficient
ēgress
 'energetic
 en'thusiastic
 'ethnological
essay (n.)
essay (v.)
evacuated
executors
expedite
ex'termination

F.
 fa'miliarities
fanatic
fantastically
fertility
flamingoes
foray
forfeited
forlorn
 'fortification
 'fossiliferous

G.
gigantic
granaries
grimaces
guttural

H.
hazardous
hereditary
Hollanders

'hospitality
husbandry

I.
 'illustration
illuminated
immorality
importunate
 'importunity
 'inaccessible
 'incommunicable
 'inconsolable
incongruous
 'individuality
 'indiscriminately
indigenous
 'inexhaustible
inevitably
infanticide
 'infertility
inhospitable
 or
 'inhospitable
inhabitants
iniquity
innumerable
 'inoffensive
inseparable
 'insignificant
intangible
 'interrogative
intolerably
 'irresistible
 'irreclaimable
 ir'regularities
 or
 ir'regularities
isolated
itinerant

J.
jeopardy

K.
kinswoman

M.
magnanimous
magnificent
maniacal
 'manifestations

marauders
 'medi~~ä~~val (4)
 'mediocrity
menacing
melancholy
methodically
midsummer
migratory
 miraculous
 'modification

N.

necessary
 necessitous
nomad
 nomadic
 'notwith**standing**

O

'opportunity
 originating
 origin
 our**ang**-outang

P.

Pacific
 'parasit**ical**
 pe'culiarities
 per**petual**
 per**spicuous**
petulant
 photography
photographing
 'phot**ographic**
 'physi**ognomy**
 Polyn**esian** (5 or 4)
precipices

predecessors
 or
 'predecessors
 prodigious
 propriety
pūtrefying

R.

r**are**fied (3)
rebut
 'recon**noitred**
 recognis**able**

or

'recognis**able**
 refract**ory**
 relay (fresh set of
 horses, or a race,
 etc.)
 r**ē**-lay (to lay again)

resinous
 retributive
 revet**mēnt**
 rheumat**ic**
 'rhododendrons
 ribaldry
 ridiculously

S.

'sacramental
 salutary
 'Sarawak

or

Sarawak
 satell**ite**
 sedulous**ly**
 servitude
 sonōrous

or

s**on**ōrous
 subsidence
 or
 subsidence
 'subterranean
 subsequently
 su'p**er**iority
 'superstitious
 'supposition
 'surreptitious

T.

tabernacle
 temerity
 terrest**rial**
 thermometers
 toboggan**ing**
 tra**verse**

U.

ultimately
 'unaccount**ably**
 'unattain**able**
 undulating

V.

veget**ables**
 vehement**ly**
 vermilion (3)
 viney**ard**
 vociferously

W.

watered
 way**faring**

APPENDIX B

EXERCISES

1. Translate the following sentences into your own language (referring to the extracts for the complete context) :

- (a) We stood out to sea and on the second day again made the land.

(Darwin, p. 12.)

- (b) We fetched within a few miles of the great rugged mountain of 'York Minster.'

(Darwin, p. 19.)

- (c) Had another sea followed the first, our fate would have been decided soon and for ever.

(Darwin, p. 20.)

- (d) Though sitting close to the fire, we were far from too warm.

(Darwin, p. 25.)

- (e) A gale of wind blew directly in our teeth.

(Darwin, p. 12.)

2. Construct sentences which will show the various shades of meaning of the following words ; you must put each word in a specially appropriate context :

To see, to behold, to descry, to sight, to spy, to catch sight of, to view, to eye, to observe, to watch, to peep at, to peer at, to stare at, to glare at, to gaze at, to glance at.

Translate the sentences you have constructed into your own language.

3. An exercise similar to No. 2, with the following words :

- (i) to shake, to brandish, to flourish, to whisk, to jerk.

- (ii) to handle, to wield, to manipulate, to hold, to grip, to grasp, to clasp, to clutch, to clench.
- (iii) to grab, to snatch, to seize, to pluck.
- 4. Write an essay on *Savage Man*.
- 5. Compare Darwin and Wallace on savage man.
- 6. Compare the Fuegians and the Dyaks.
- 7. Give an account of the South American earthquake in your own words, with a sketch map of the affected area.
- 8. Write an essay on *Earthquakes*.
- 9. An exercise similar to No. 2, with the words below; each word should have an appropriate context, nouns, adjectives and adverbs as well as verbs being carefully selected to intensify the meaning of the word under study:
Storm, gale, hurricane, tempest, thunderstorm, snowstorm, blizzard, wind, breeze, squall.
- 10. 'To try to describe mountains and forests,' says Mr. Candler, 'is a most unprofitable task; all the adjectives of scenic description are exhausted.' Does Darwin succeed? Does he convey his impressions by means of 'adjectives'?
- 11. Describe any mountain journey or piece of impressive mountain scenery you know well enough to remember in detail.
- 12. Watch an insect or any other animal, and write an interesting account of your observations after the manner of Darwin's account of the tortoise.
- 13. Endeavour to give as many explanations as you can imagine possible, of the facts recorded by Darwin about the animals and plants of the Galapagos Islands. Say what Darwin's theory was.
- 14. Write an essay on the feelings which inspired the following:
 - (i) 'It is wonderful to think that two long marches would land us at the Pole.'

- (ii) 'One has passed the gate that has been closed against the profane for centuries.'
- (iii) 'Early in the morning I climbed up a mountain on one side of the valley, and enjoyed a far extended view over the Pampas.'
- (iv) 'I saw that old father Nile without any doubt rises in the Victoria Nyanza, and, as I had foretold, that lake is the great source of the holy river which cradled the first expounder of our religious belief.'

15. Write an essay on *The Traveller's School of Humanity*. (Doughty.)

16. Render the following extracts from Doughty in simple, straightforward modern English :

- (i) It chanced Zeyd to lose a camel which had been frayed by wolves.
- (ii) Yet, having led her to the well, if there be any, by, of the common tribesmen the sheykh will call him to draw her water.
- (iii) If I did but ask the names of the simples, it was answered thus :
- (iv) An upland which never runs down with water.
- (v) But fearful by nature, they stray not then very far off.
- (vi) And they murmuring he tells them, wellah, his affairs do call him forth, adieu, he must away to the mejlis, go they and seek coffee elsewhere.
- (vii) They often removing, Zeyd could not tell their camping ground within a dozen or score miles.
- (viii) Is any man seen to have a little of the coveted leaf, knotted in his kerchief, he durst not deny to divide it with them—which if he withheld, yet pretending mirth, the rest would have it from him, perforce.
Thus they taste at least a savour of tobacco, whereof, when they are any while deprived, I

have seen them chop their pipe-stems small for the little tobacco moisture which remained in them.

- (ix) The bowl brought in foaming, the children gather to it, and the guest is often bidden to sup with them, with his fingers, the sweet froth ; or this milk poured into the sour-milk skin and shaken there a moment, the housewife serves it forth again to their suppers, with that now gathered sourness which they think the more refreshing.

17. Write notes explaining how the above passages differ in grammar, idiom and use of words from contemporary English.

18. Translate the above nine extracts from Doughty into your own language, in any style you think suitable.

19. Translate other passages from Doughty which your teacher may select.

20. Describe the life of the Beduin Arab in English and also in your own language.

21. Describe an Arab encampment.

22. Tell the story of the Rajah and the Census in your own language.

23. Translate your vernacular rendering of the Census story into English, and compare the result with the original.

24. ' I will try to explain as logically as possible why it fascinated me more than any scenery I have seen.'

... ' I am determined to be logical in my preference.'

(Mr. Candler on his description of Chumbi Valley.)

Explain the above extracts. How does Mr. Candler carry out his intention ?

25. Describe Phari Jong and its surroundings in your own way.

26. On a large blank map of the world mark as many of the places mentioned in the text as you can find in your atlas.

27. Write an essay on *The Hunger of the Quest*.
28. By reference to additional books write an account of Geographical Exploration and Discovery since 1800.
29. Write an appreciative account of the efforts to conquer Mount Everest.
30. Which of the authors here represented do you think shows the finest powers of observation, and which is the weakest in this respect? Your answer should show close study of the text, and short quotations to illustrate your argument.
31. Compare the style of Doughty with that of Scott. Quote and refer to the text.
32. Study the use of the 24 anomalous finites in Scott, Wallace, and Candler. Take one author at a time, and classify each usage under one of the four rules given in the notes.
33. Compare the voyages of discovery of the fifteenth and sixteenth centuries with geographical exploration and discovery in the nineteenth century. The following headings are suggested for your guidance :
- (i) Purpose or Motive.
 - (ii) The Men.
 - (iii) Their Methods.
 - (iv) The Results of their Travels for Mankind.
34. Translate lines 17 to 19 on page 215.
35. What are your impressions of Africans after reading Livingstone and Speke.
36. Write short essays on :
- (a) Civilisation.
 - (b) The Brotherhood of Man.
 - (c) 'Back to the Simple Life.'
 - (d) 'Utopias and the "perfect social state."'
 - (e) 'Man is by nature peaceful and good.'

37. Imagine the Fuegians' visit to England.

38. Write a story about Jemmy Button and his wife living with their tribe.

39. Study the following words in the Oxford (Concise) Dictionary and write a short note on their etymology and present meaning :

(a) Spirit, spirits, spirited, aspire, perspire.

(b) Animus, animosity, animal, animate, animism, anemometer.

(c) ghost, gust, gush, gasp, geyser, ghastly.

(d) soul, hail, health, salute, salutary, salient, saline, salacious, sigh, sough, sob, inhale.

(e) flat, flag, flake, flabby, flop.

(f) wag, way, waft, weigh, vehicle, waive, waif.

(g) water, wet, wash, undulate.

(h) howl, owl, wolf, vulpine, lupine, vulture, vulnerable, wild, weald, wold, wound.

(j) break, breach, fragment, brittle, brisk.

(k) draw, drag, drain, drink, train, tractor, dregs, thread, threat, throat, drought, draught, draft.

40. Develop lists similar to those in the preceding exercise, beginning with the following words : crab, fork, crock, swift, cliff, skin, skirt, slide, scrape, slight.

